

FINAL REPORT

PROJECT TITLE

“Biodiversity inventory, sustainable conservation and establishment of a new nature reserve in Harghita Mountains (Eastern Romanian Carpathians, Harghita county), Romania”

NAME OF APPLICANT

Anna-Mária Csergő

CONTACT DETAILS

Work address:

Sapientia Hungarian University of Transylvania, Târgu-Mureş
Sighişoarei Str. 1C
540553, Op.9, CP 4
web: www.emte.ro

Personal address:

tel: 0040-743-068498
email: kankalinka@yahoo.com

COMPILED BY:

Anna-Mária Csergő
Gusztáv Jakab, PhD
László Ambrus
László Demeter
Bíró Béla



PROJECT BACKGROUND

The main goal of the project was to establish a new nature reserve in Harghita Mountains (Eastern Romanian Carpathians), to evaluate its biodiversity, and make steps for sustainable use.

Harghita Mountains shelter several peat bogs, extremely fragile habitats of European importance. Some of them are protected, but several of them are unknown to scientific and local communities. Within our project, we have chosen a representative area from these mountains, known to local people as “Rákosi Sáté” (Peatland from Rákos) or “Szökő Láp” (Peatland of the Szökő Brooklet), one of the most beautiful and well-preserved peat lands from Transylvania. It lies on the Eastern slope of Madarasi Harghita Mountains, Harghita County. Within the past 18 years, the former landowners claimed back the right of its use. Trying to anticipate its degradation because of improper land use, we ran the following activities: 1) complex research within the area (biodiversity investigations, land use information’s), 2) steps to grant it the protected area status, 3) collaboration with local stakeholders and landowners for its correct management, 4) raising public awareness.

Granting the protected area status to one or several peat bogs and neighbouring areas in Harghita Mountains, and their biodiversity inventory, are a primary condition of nature conservation in the area. Unknown values run the risk of being lost because of lack of awareness and improper land use. The management plan of the future nature reserve will create the framework necessary for a sustainable conservation and use of its natural values, realizing a harmonious relation between man and nature.

RESULTS

1. During the project we organized several scientific surveys of the area, we delimited the borders of the future nature reserve, we assessed its natural values (more than 150 plant and animal species, landscape), and we identified its protected plant communities and habitats, and prepared a list of the protected plant and animal species. We monitored the population’s state of conservation during one year.



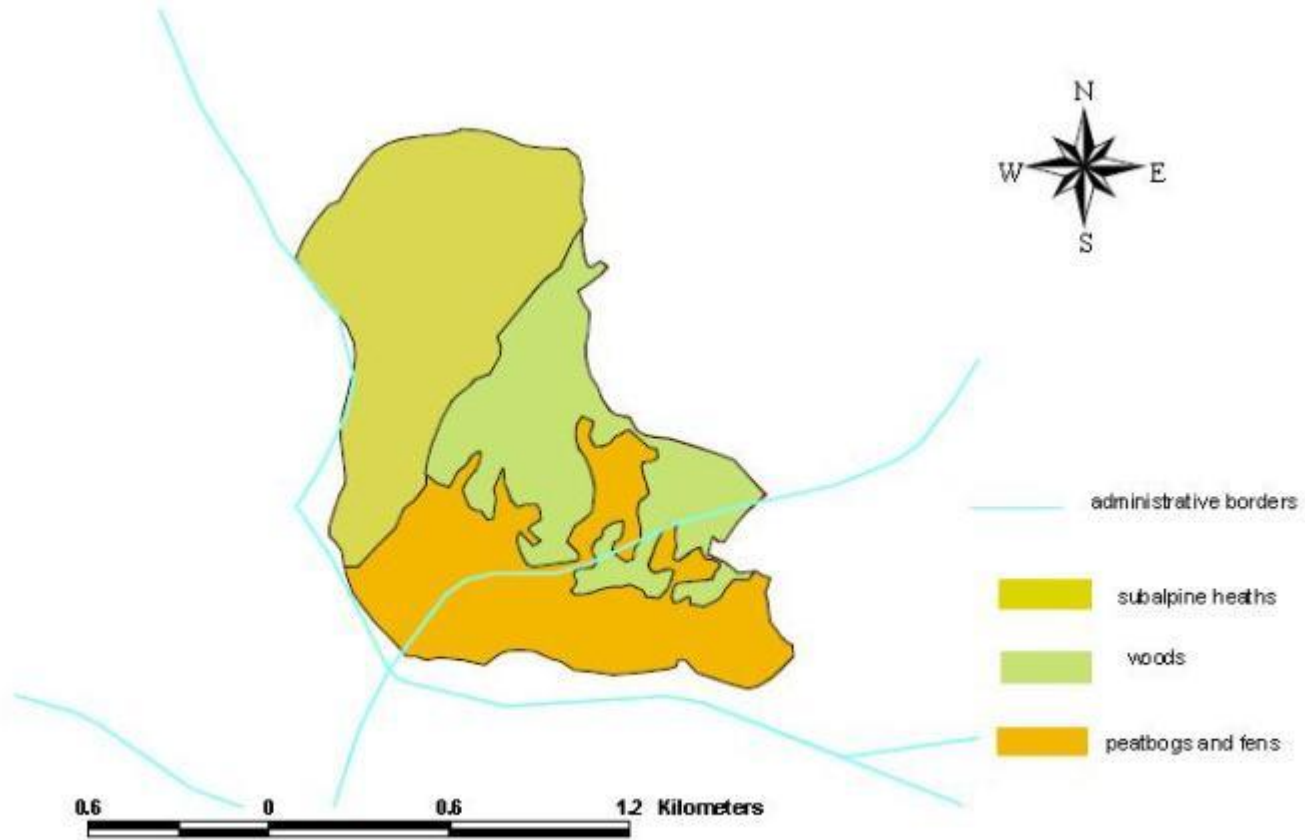
The area of the nature reserve encompasses approximately 186 hectares and covers three main habitat types: peat bogs/fens, subalpine grasslands and heaths and woods.

So far, we identified seven habitats of community importance. We list them below, together with the corresponding habitat types and plant communities from Romania:

Code	Natura 2000 Habitat	Code	Corresponding Romanian Habitat Type	Corresponding Plant Communities
4060	Alpine and Boreal heaths	R3108	Tufărișuri sud-est carpatice de ienupăr pitic (<i>Juniperus sibirica</i>)	<i>Campanulo abietinae</i> - <i>Juniperetum</i> Simon 1966
		R3109	Tufărișuri alpine de vuietoare (<i>Empetrum nigrum hermaphroditum</i>) și afin vânăt (<i>Vaccinium gaultherioides</i>)	<i>Cetrario-Vaccinietum gaultherioidis</i> Hadač 1956
6230 *	Species-rich <i>Nardus</i> grasslands, in siliceous substrates in mountain areas (and submontan areas, in Continental Europe)	R3609	Pajiști sud-est carpatice de țăpoșică (<i>Nardus stricta</i>) și <i>Viola declinata</i>	<i>Violo declinatae-Nardetum</i> Simon 1966
7110*	Active raised bogs	R5101	Turbării sud-est carpatice, mezo-oligotrofe, acide cu <i>Eriophorum vaginatum</i> și <i>Sphagnum recurvum</i>	<i>Eriophoro vaginati-Sphagnetum recurvi</i> Hueck 1925
		R5102	Turbării sud-est carpatice, oligotrofe cu <i>Sphagnum magellanicum</i>	<i>Sphagnetum magellanicum</i> (Malcuit 1929) Kästner et Flössner 1933
7140	Transition mires and quaking bogs	R5407	Mlaștini sud-est carpatice, mezotrofe cu <i>Carex lasiocarpa</i>	<i>Caricetum lasiocarpae</i> Koch 1926
		R5408	Mlaștini sud-est carpatice, oligotrofe cu <i>Carex limosa</i>	<i>Caricetum limosae</i> Br.-Bl. 1921
7230	Alcaline fens	R5405	Mlaștini sud-est carpatice, eutrofe cu <i>Carex flava</i> și <i>Eriophorum latifolium</i>	<i>Carici flavae-Eriophoretum latifolii</i> Soó 1944
7240*	Alpine pioneer formations of <i>Caricion bicoloris - atrofuscae</i>	R5403	Turbării sud-est carpatice, mezo-oligotrofe cu <i>Carex rostrata</i> și <i>Sphagnum recurvum</i>	<i>Sphagno-Caricetum rostratae</i> Steffen 1931
91D0*	Bog woodland	R4412	Rariști sud-est carpatice de molid (<i>Picea abies</i>) și/sau pin silvestru (<i>Pinus sylvestris</i>) de tinoave	<i>Sphagno-Piceetum</i> (Tx. 1937) Hartman 1942
		R5410	Mlaștini sud-est carpatice, mezotrofe cu <i>Carex echinata</i> și <i>Sphagnum recurvum</i>	<i>Carici echinatae-Sphagnetum</i> Soó (1934) 1954
		R5411	Mlaștini sud-est carpatice, eu-mezotrofe cu <i>Carex nigra</i> ssp. <i>nigra</i> , <i>Juncus glaucus</i> și <i>Juncus effusus</i>	<i>Junco-Caricetum fuscae</i> Tx. (1937) 1952

The heaths and grasslands occupy 39.25% of the area, the peat bogs and the fens 33.33%, whereas the woods 27.42% respectively:

Vârful Harghita Mădăras - Mlastina "Rákosi Sáté" Nature Reserve



More than 20 plant species identified in the nature reserve are protected, and more than 20 are endemics or presumed glacial relicts (see the two tables below):

Family	Protected higher plant species	Status	Document*	Estimated Population Size
Ranunculaceae	<i>Ranunculus carpaticus</i> Herbich	R	O	unknown
Caryophyllaceae	<i>Stellaria palustris</i> Retz.var. <i>laxmannii</i>	R	O	<100
Rosaceae	<i>Comarum palustre</i> L.	R	O	>50000
Droseraceae	<i>Drosera rotundifolia</i> L.	R	O	>50000
Empetraceae	<i>Empetrum nigrum</i> L. ssp. <i>hermaphroditum</i> (Hagerup)Bocher	R	D; O	<100
Ericaceae	<i>Oxycoccus palustris</i> Pers.	R	D; O	>50000
Ericaceae	<i>Vaccinium uliginosum</i> L.		OUG57/2007, Annex 4B	unknown
Cyperaceae	<i>Vaccinium gaultheroides</i>	R		unknown
Scrophulariaceae	<i>Veronica alpina</i> L. f. <i>serratifolia</i>	R	O	<100
Scrophulariaceae	<i>Veronica fruticans</i> Jacq.	R	O	unknown
Campanulaceae	<i>Phyteuma vagneri</i> Kerner	R	O	unknown
Lentibulariaceae	<i>Pinguicula vulgaris</i> L.	R	D; O	>10000
Alliaceae	<i>Allium victorialis</i> L.	R	D; O	unknown
Orchidaceae	<i>Dactylorhiza cordigera</i> subsp. <i>sicolorum</i> (Soó)Soó	R	O	>50000
Orchidaceae	<i>Listera cordata</i> L.	R	B; O	<100
Orchidaceae	<i>Pseudorchis albida</i> (L.)&D. Löve	R	O	<100
Cyperaceae	<i>Carex limosa</i> L.	R	D; O	<5000
	Protected moss species			
	<i>Hamatocaulis vernicosus</i> (Mitt.) Heden.	K**	Bern Convention; Annex II of Habitat Directive CEE 43/92; OUG57/2007, Annex 3;	unknown
	<i>Sphagnum</i> sp.		OUG57/2007, Annex 5A	
	Endemic higher plant taxa	Region:		
Ranunculaceae	<i>Ranunculus carpaticus</i> Herbich	Carpathians		unknown
Empetraceae	<i>Empetrum nigrum</i> L. ssp. <i>hermaphroditum</i> (Hagerup)Bocher	Eastern Carpathians		<100
Scrophulariaceae	<i>Veronica alpina</i> L. f. <i>serratifolia</i>	Eastern Carpathians		unknown
Iridaceae	<i>Crocus vernus</i> (L.)Hill	Carpathians and the Balkans		unknown
Orchidaceae	<i>Dactylorhiza cordigera</i> subsp. <i>sicolorum</i>	E. and N. Carpathans		>50000

	(Soó)Soó		
	Other, phytogeographically important higher plant species	Area	
Rosaceae	<i>Comarum palustre</i> L.	Circumboreal	>50000
Polygonaceae	<i>Polygonum viviparum</i> L.	Circumpolar Arctic-Alpine	unknown
Empetraceae	<i>Empetrum nigrum</i> L.	Circumpolar Arctic-Alpine	<10000
Ericaceae	<i>Oxycoccus palustris</i> Pers.	Circumboreal	>50000
Ericaceae	<i>Vaccinium uliginosum</i> L.	Circumboreal	unknown
Cyperaceae	<i>Vaccinium gaultheroides</i>	Circumpolar Arctic-Alpine	unknown
Scrophulariaceae	<i>Veronica alpina</i> L. f. <i>serratifolia</i>	Circumpolar Arctic-Alpine	unknown
Cyperaceae	<i>Carex limosa</i> L.	Circumboreal	<5000
Cyperaceae	<i>Carex pauciflora</i> Lightf.	Circumboreal	>100000
	Other, phytogeographically important moss species		
	<i>Cladopodiella fluitans</i> (Nees in Funck) Buch in Kalliola	northern-suboceanic	>1000
	<i>Scapania paludicola</i> Loeske & K. Muell. in K. Muell.	boreal-montane	unknown
	<i>Hamatocaulis vernicosus</i> (Mitt.) Heden.	boreal	unknown
	<i>Sphagnum compactum</i> Lam. & DC.	boreal	<100
	<i>Sphagnum fuscum</i> (Schimp.) Klinggr.	boreal-continental	unknown
	<i>Sphagnum platyphyllum</i> (Lindb. Ex Braithw.) Sull. ex Warnst.	boreal	>500

*National Red Lists: O=Oltean et al. 1994, D=Dihoru et al. 1994; B=Boşcaiu et al.1994; **K (insufficiently known)

2. We have prepared the protected area proposal document, which contains 16 pages of scientific foundation and several annexes, in conformity with the requirements of the Decree 1710/2007 Regarding the Approval of Documentation for Establishment of New Nature Reserves of National Importance. The document has been submitted to the authorized institutions.

See the first page of the document:

FORMULAR STANDARD
pentru caracterizarea ariilor naturale protejate

1. Denumirea ariei naturale protejate:

VĂRFUL HARGHITA MĂDĂRAȘ - MLAȘTINA „RĂKOȘI SĂTÈ”

2. Codul ariei naturale protejate)

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

3. Încadrarea teritorial-administrativă

Județul/județele	HARGHITA
Localitatea/localitățile pe al căror teritoriu administrativ se află aria	COMUNA MĂDĂRAȘ-CIUOC COMUNA RACU

4. Categoria și tipul ariei naturale protejate (marcați cu x)

	Categoria										Caracteristici tipologice									
	I	II	III	IV	V	VI	R	P	B	b	z	g	s	p	f	m	u	pj	SPA	SCI
Aria protejată				x							x									
Include:																				
Este inclusă în:																				x
Transfrontalieră cu:																				

5. Suprafața/lungimea

Suprafața (ha)	186
Lungimea (m)	6 461.97

6. Alitudinea

Maximă	Minimă	Medie
1800	1560	1680

7. Statutul legislativ (actul de declarare)

Tipul actului	Lege	JMC	HCM	HG	CM	OG	CJ	CL	Altele
Nr.									
Data									

1

3. We gathered information on landowners, local stakeholders and the way they intend to use the natural resources of the area. We met the landowners several times and we have organized two more important workshops with all interested parties, NGOs and national institutions. We highlighted the most urgent and effective measures needed. Pictures from the meetings:





4. We conducted a series of activities in order to raise public awareness through a web page, media, leaflets, and presentations. Agora Working Group for Sustainable Development from Odorheiu Secuiesc (Harghita County) had an important role in this part of the project and held several presentation on this subject.

Informative materials (brochures, leaflets) prepared in three languages (Hungarian, Romanian and English) were distributed to the authorities, stakeholders, local people, and schools.

Here is the English version of the brochure:

Why to protect it?



Peatbog lake and the Madarasi Hargita Peak

The spring-fens, raised-bogs and rich-fens developed in the Rákosi Sáté Nature Reserve are extremely fragile habitats that are very important from conservational point of view.

The cold climate of the mountain created conditions for survival of several rare and protected plant species, many of them glacial relicts of endemits.

The absence of proper management measures would lead to the irreversible degradation of the peatland and we would loose its unique natural values.

Conservation Projects



The initiative to protect the Madarasi Hargita peak and the Rákosi Sáté peatland began in 2007, and have the support of **Rufford Maurice Laing Foundation**.



Partners:



Agora Working Group for Sustainable Development, Odorheiu Secuiesc
www.green-agora.ro



Environmental Protection Agency of Harghita County
www.epmtr.ro

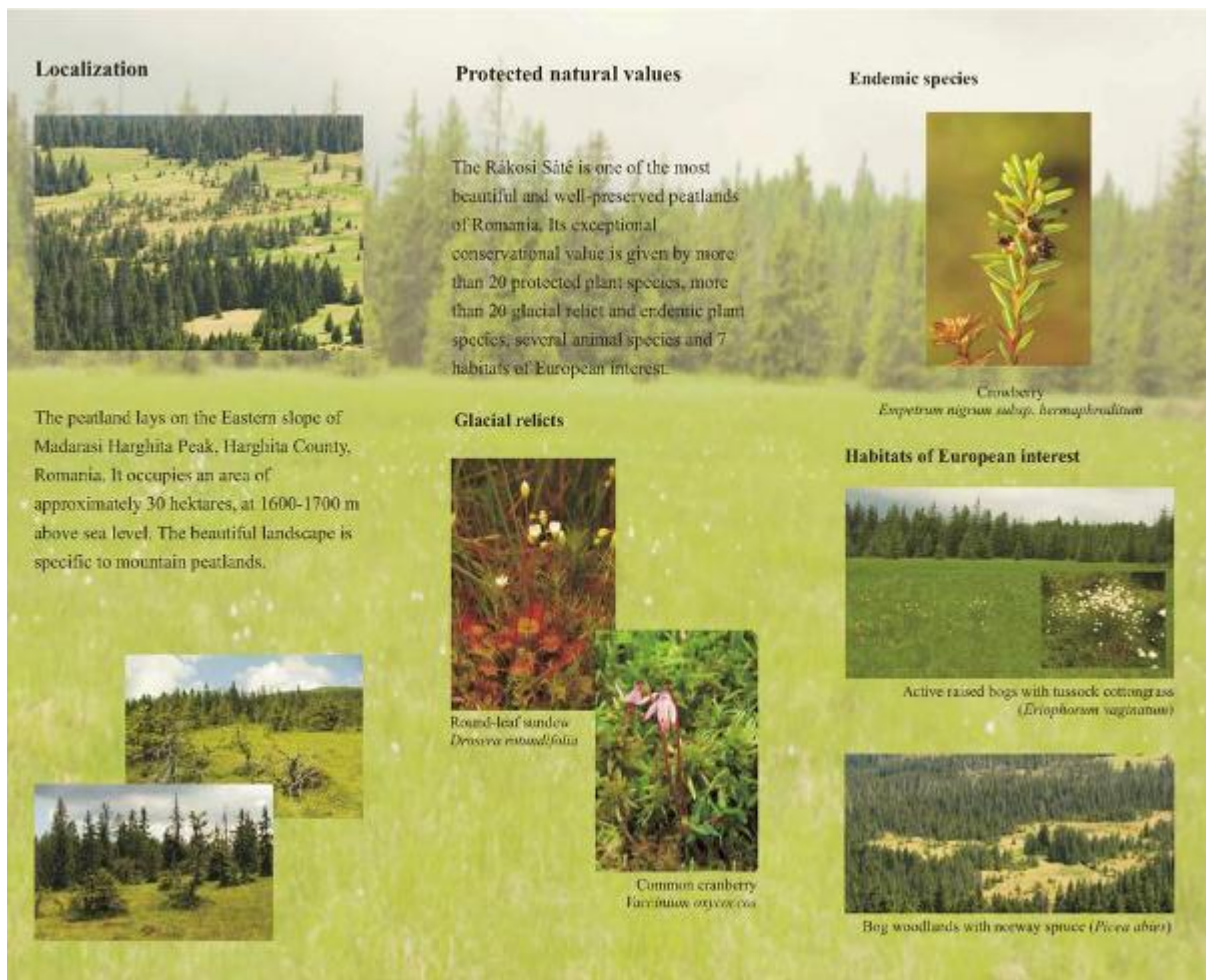
Further informations:
www.szokolaj.green-agora.ro
www.ruffordmourelaings.org/en/projects/anna_maria_csergo

Contact persons:
Anna-Mária Csergő - Tel. 0040-743068498
László Ámbros - Tel. 0040-740174762
József Bóth - Tel. 0040-740961049

Text and pictures:
Gusztáv Jakab, Anna-Mária Csergő
László Ámbros



The Madarasi Hargita-Rákosi Sáté Nature Reserve



Please find the webpage of the nature reserve at:
www.szokolap.green-agera.ro

Please find our interviews on the webpage of the local newspapers:
 - www.uh.ro (issue from 23.07.2008)

Please find attached our scientific publication on this natural area, together with other important botanical discoveries from Szeklerland, Transylvania.

5. We also outlined a management plan of the nature reserve, which, however, is not yet completed because of the short time available.

During our activities, the Environmental Protection Agency of Harghita County, Romania was a valuable partner who contributed with human and material resources to the success of our project.

RECOMMENDATIONS:

- 🌍 The best management strategy of the Vârful Harghita Mădăraş - Mlaştina “Rákosi Sáté” Nature Reserve is the conservation through non-intervention.
- 🌍 It is important that the landowners collaborate with the members of this project, the scientific community from Romania, the EPA and NGOs in order to preserve this botanical reserve.

- It is important to finalize the management plan and to continue the public awareness and the information campaign.

We thank Rufford Small Grants Foundation the opportunity to know better this land and its people and to contribute a little to their harmonious coexistence.

Images from the protected area and our activity:







