

MOUNTAIN RESCUE SERVICE - INEVITABLE HELP AT RECREATIONAL AND SPORT ACTIVITIES IN MOUNTAINOUS AREAS IN SLOVAKIA

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Abstract

The article points out the importance of the activities of the Mountain Rescue Service (MRS) in cases of aid provision, which is necessary at recreational, tourist and various sports activities in the mountainous areas of the Slovak Republic. MRS as a national rescue organization was established on 1.12.1954. From 1 January 2003, the Mountain Rescue Service was established as a state budget organization, which, based on Act no. 577/2002 on MRS, is managed by the Ministry of the Interior of the Slovak Republic. MRS is a part of the Integrated Rescue System of the SR. Due to the increasing number of visitors to the mountains and the development of recreational and sports activities in these areas, the number of accidents that require the intervention of the MRS is also increasing. Currently, MRS performs more than 2000 interventions annually. A large part of MRS interventions is carried out mainly in connection with difficult terrain and a high number of visitors. Currently, the MRS has a headquarters in Horný Smokovec in the High Tatras, 8 regional centers, an Avalanche Prevention Center in Liptovský Hrádok, an MRS Training Center in Liptovský Hrádok and an Information Center in Starý Smokovec (High Tatras). In 2022, MRS had 178 employees, of which 148 were rescuers.

Key words: Leisure interests, tourism, injuries, medical assistance

Introduction

In a direct connection with the ever increasing attendance and development of recreational, tourist and sporting activities in mountain areas, the number of those who need help to save their health or life is also increasing. In the Slovak Republic, as in other countries of the world, this assistance is provided by mountain rescue service (MRS). MRS as a national rescue organization was in SR established on 1.12.1954. From 1 January 2003, the MRS was established as a state budget organization, which, based on Act no. 577/2002 on MRS, is managed by the Ministry of the Interior of the Slovak Republic. Rescuers from MRS are ready to help save health and lives continuously 24 hours a day and 7 days a week. In 2022, MRS in SR had 178 employees, of which 148 were rescuers. Currently, the MRS has a headquarters in Horný Smokovec in the High Tatras and 8 regional centers (RC):

RC MRS Vysoké Tatry - Starý Smokovec in High Tatras

RC MRS Nízke Tatry – Jasná in Otupné - Liptovský Mikuláš

RC MRS Nízke Tatry – Bystrá in Bystrá

RC MRS Západné Tatry - Žiarska dolina in Smrečany

RC MRS Západné Tatry – Zverovka in Zuberec

RC MRS Malá Fatra – Štefanová in Terchová

RC MRS Veľká Fatra – Donovaly in Mišúty - Donovaly

OS HZS Slovenský raj – Čingov – in Čingov - Spišská Nová Ves

An indispensable part of the MRS structure are an Avalanche Prevention Center in Liptovský Hrádok, an MRS Training Center in Liptovský Hrádok and an Information Center in Starý Smokovec (High Tatras).

The organizational structure of the MRS and a wide range of its activities within the Integrated Rescue System of the Slovak Republic were elaborated by Kubas et al. (2021). Ganoczy (2015) divided the activities of the MRS in Slovakia into four basic groups:

- monitoring,
- rescue activity,
- preventive activity,
- training activity.

Material

Based on the Annual Reports of the MRS from 2008 to 2022 (freely available on the site: <https://hzs.sk>), we have prepared a statistical overview of interventions performed by rescuers over

the last 15 years. Due to the restrictions related to the COVID-19 pandemic, the year 2021 was atypical in relation to the visitation of mountain recreation areas (small numbers of visitors). Due to the possible distortion of the results, the calculations were performed without taking into account the mentioned year.

Results

The processed data contains Tables 1-3. In Tab. 1, the data on interventions according to regional centers and NACA Location are processed. Of the total number of 32,107 MRS interventions in the years 2008-2022, most (13,247, i.e. 41.26%) were carried out in the Low Tatras area. We assume that this high number of interventions is primarily related to the number of visitors in this area. Relatively large numbers of interventions were also in the area of the High Tatras (5,609, i.e. 17.47%) and Veľká Fatra (5,595, i.e. 17.43%).

In Tab. 2, the data on the total number of MRS interventions by individual years are processed. These data are subsequently divided according to whether interventions were carried out in mountainous areas or on ski tracks. Out of the total number of interventions of 32,107; 10,405 (32.58%) were carried out in mountain areas and 21,662 (67.47%) on ski tracks. Due to the significant restriction of attendance in the mentioned recreational areas in 2021 (in connection with the COVID-19 pandemic), we have processed in Tab. 2 also the data without the indicated year. Annually, MRS rescuers perform an average of 2232 interventions, of which an average of 697 (31.2%) interventions in mountainous areas and an average of 1,535 (68.8%) interventions on ski tracks.

In Tab. 3, the data on the number of MRS interventions (2008-2022) according to the nationalities of the affected persons are processed. From the overview, it can be seen that Slovaks required the most interventions (16,516 persons, i.e. 51.44%). Visitors of Polish nationality were helped by rescuers a total of 5,461 times (17.01%), and visitors of Czech nationality 3,198 times (9.96%).

Tab. 1: Interventions of MRS by Regional centers and NACA^(x) Location 2008-2022

Year	Regional center						Σ
	High Tatras	West Tatras	Low Tatras	Veľká Fatra	Malá Fatra	Slovenský raj	
2008	269	93	762	356	205	50	1735
2009	232	75	682	345	187	66	1587
2010	237	98	704	324	211	51	1625
2011	410	93	790	347	193	90	1923
2012	444	96	795	378	309	92	2114
2013	372	118	999	421	273	76	2259
2014	309	62	893	303	254	93	1914
2015	455	152	889	397	247	89	2229
2016	444	136	1158	381	242	84	2445
2017	481	164	1048	431	468	81	2673
2018	471	173	1136	460	444	76	2760
2019	451	216	1161	491	494	75	2888
2020	352	235	1027	385	388	71	2458
2021 ^(xx)	224 ^(xx)	91 ^(xx)	183 ^(xx)	165 ^(xx)	132 ^(xx)	71 ^(xx)	866 ^(xx)
2022	458	219	1020	411	451	72	2631
Σ	5,609	2,021	13,247	5,595	4,498	1,137	32,107
%	17.47	6.29	41.26	17.43	14.01	3.54	100
φ ^(xx)	373.9 ^(xx)	134.7 ^(xx)	883.1 ^(xx)	373 ^(xx)	299.9 ^(xx)	75.8 ^(xx)	-
φ ^(xxx)	384.6 ^(xxx)	137.9 ^(xxx)	933.1 ^(xxx)	387.9 ^(xxx)	311.9 ^(xxx)	76.1 ^(xxx)	-

Notes to Tab. 1: ^(x) NACA - National Care & Control Association; ^(xx) Data affected by restrictions in 2021 in connection with the COVID-19 pandemic; ^(xxx) Data without 2021

Tab. 2: The number of MRS interventions 2008-2022

Year	Mountainous areas	(%)	Ski tracks	(%)	Together
2008	536	30.89	1,199	69.11	1,735
2009	548	34.53	1,039	65.47	1,587
2010	543	33.42	1,082	66.58	1,625
2011	588	30.58	1,335	69.42	1,923

2012	713	33.73	1,401	66.27	2,114
2013	566	25.06	1,693	74.94	2,259
2014	646	33.75	1,268	66.25	1,914
2015	673	30.19	1,556	69.81	2,229
2016	786	32.15	1,659	67.85	2,445
2017	757	28.32	1,916	71.68	2,673
2018	746	27.23	2,014	72.97	2,760
2019	910	31.51	1,978	68.49	2,888
2020	795	32.34	1,663	67.66	2,458
2021 ^(x)	686 ^(x)	79.21 ^(x)	180 ^(x)	20.79 ^(x)	866 ^(x)
2022	952	36.18	1,679	63.82	2,631
Σ	10,445	32.53	21,662	67.47	32,107
φ	696.3	34.60	1,444.1	65.40	2,140.5
φ ^(xx)	697.1 ^(xx)	31.42 ^(xx)	1,534.4 ^(xx)	68.58 ^(xx)	2,231.5

Note to Tab.1: ^(x) Data affected by restrictions in 2021 in connection with the COVID-19 pandemic; ^(xx) Data without 2021

Tab. 3: The number of MRS interventions by the nationality of the disabled person 2008-2022

Nationality	Number	%
Slovakia	16,516	51.44
Poland	5,461	17.01
Czechia	3,198	9.96
Hungary	1,386	4.32
Ukraine	855	2.67
Lithuania	709	2.21
Russia	367	1.15
Germany	287	0.89
United Kingdom	263	0.82
Romania	235	0.73
Belarus	157	0.49
Estonia	155	0.48
Israel	126	0.39
Latvia	124	0.39
Belgium	87	0.27
Netherlands	76	0.24
France	62	0.19
Denmark	56	0.17
Ireland	51	0.16
Austria	46	0.14
Italy	30	0.09
Spain	24	0.07
Finland	19	0.06
Serbia	12	0.04
Other and unkn.	1,805	5.62
Σ	32,107	100

Conclusion

- MRS as an important part of the Integrated Rescue System of the SR and actively cooperates with other rescue services – Fire and Rescue Service, Emergency Medical Service, Police of the Slovak Republic, etc.

In addition to direct rescue interventions, MRS workers also perform other important activities that are indispensable for visitors in mountainous areas. They are mainly:

- In cooperation with the Slovak Hydrometeorological Institute, it conveys the data on the current weather and short- and long-term forecasts, issues warnings in connection with the weather;
- processes data on avalanche danger, informs about the avalanche situation and determines the degree of avalanche danger, etc.

The work of rescuers in difficult conditions is dangerous and extremely demanding both mentally and physically. It requires a wide range of knowledge and skills in various specialties on which the health and life of disabled persons depend (Fig. 1, Fig. 2).



Fig. 1: MRS rescuers are looking for a person buried by an avalanche (photo by P. Beťko)



Fig. 2: Transport of the injured person to the ambulance (photo by P. Beťko)

References

- Ganoczy, Š. (2015). Operation of the rescue service within the integrated rescue system. Pôsobenie záchranej služby v rámci integrovaného záchranného systému. In: Zborník referátov 20. medzinárodnej vedeckej konferencie: Riešenie krízových situácií v špecifickom prostredí. Žilina: Žilinská univerzita v Žiline, p. 153-162. (in Slovak)
- Kubas, J., Hollá, K., Polorecká, M. (2021). Safety impact of the Mountain Rescue Service. Vplyv horskej záchranej služby na bezpečnosť. Krízový manažment – Crisis Management, 20 (2) p. 33-38. (In Slovak)

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Souhrn

Článek poukazuje na význam činnosti Horské záchranné služby (HZS) v případech poskytování pomoci, která je nezbytná při rekreačních, turistických a různých sportovních aktivitách v horských oblastech Slovenské republiky. HZS jako národní záchranná organizace vznikla 1.12.1954. Od 1. ledna 2003 byla zřízena Horská služba jako státní rozpočtová organizace, která na základě zákona 577/2002 o HZS, spravuje Ministerstvo vnitra Slovenské republiky. HZS je součástí Integrovaného záchranného systému SR. Vzhledem ke zvyšující se návštěvnosti hor a rozvoji rekreačních a sportovních aktivit v těchto oblastech se zvyšuje i počet úrazů, které vyžadují zásah HZS. V současné době HZS provádí více než 2000 zásahů ročně. Velká část zásahů HZS je prováděna především v souvislosti s náročným terénem a vysokou návštěvností jednotlivých oblastí. V současné době má ředitelství HZS sídlo v Horném Smokovci ve Vysokých Tatrách, 8 regionálních středisek, Středisko lavinové prevence v Liptovském Hrádku, Výcvikové středisko HZS v Liptovském Hrádku a Informační středisko ve Starém Smokovci (Vysoké Tatry). V roce 2022 měla HZS 178 zaměstnanců, z toho 148 záchranářů. V článku jsou zpracovány údaje o zásazích MRS za posledních 15 let (2008-2022) podle jednotlivých regionálních center, resp. lokalit-NACA Location (Tab. 1), údaje o počtu zásahů v horských oblastech a na lyžařských tratích (Tab. 2) a podle národnosti postižených osob (Tab. 3).

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