



Dealing with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Riešenie mimoriadnych udalostí v rámci cezhraničnej spolupráce medzi Hasičským záchranným zborom Karlovarského kraja a Zemským okresom Tirschenreuth

Martin TOMÁŠEK¹

¹ VSB – Technical University of Ostrava, Faculty of Safety Engineering

The manuscript was received on 10. 09. 2021 and was accepted after revision for publication on 16. 11. 2021

Abstract:

The subject of this thesis is how fire protection units deal with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district in the Federal Republic of Germany. This specifically concerns a fire protection unit from the Cheb fire station and units of a volunteer fire brigade in Waldsassen and Neualbenreuth. The thesis also discusses the organization of fire protection units in the border area and legislation for their operation. It also provides a comprehensive overview of the joint training and intervention activities on both sides of the state border. Finally, it presents proposals for improving and streamlining the cooperation between fire protection units in the preparation and resolution of emergencies in the border area.

The subject aims to present a comprehensive overview of the current state of mutual cooperation and preparation for dealing with emergencies in the border area. An analysis of available information and a description of the current system in border area cooperation was used to achieve the set goals.

Keywords: border area cooperation, fire protection units, training, emergency

Abstrakt:

Príspevok sa zaoberá problematikou riešenia mimoriadnych udalostí jednotkami požiarnej ochrany v rámci cezhraničnej spolupráce medzi Hasičským záchranným zborom Karlovarského



Dealing with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Martin TOMÁŠEK

kraja a Zemským okresom Tirschenreuth v Spolkovej republike Nemecko. Konkrétne sa jedná o jednotku požiarnej ochrany z požiarnej stanice Cheb a jednotky zboru dobrovoľných hasičov obcí Waldsassen a Neualbenreuth. Príspevok je ďalej zameraný na organizáciu jednotiek požiarnej ochrany v prihraničnej oblasti a právne predpisy pre ich fungovanie. Opomenutá tu nie je ani spoločná odborná príprava a zásahová činnosť na oboch stranách štátnej hranice. Na záver prináša príspevok návrhy na zlepšenie a zefektívnenie spolupráce medzi jednotkami požiarnej ochrany v rámci prípravy a pri samotnom riešení mimoriadnych udalostí cezhraničného charakteru.

Príspevok si kladie za cieľ predstaviť ucelený prehľad o aktuálnom stave vzájomnej spolupráce a príprave na riešenie mimoriadnych udalostí cezhraničného charakteru. Na dosiahnutie vytýčených cieľov bola využitá analýza dostupných informácií a deskripcia existujúceho systému cezhraničnej spolupráce.

Kľúčové slová: cezhraničná spolupráca, jednotky požiarnej ochrany, odborná príprava, mimoriadna udalosť

Introduction

In short, the aim and basis of any cooperation in border areas is the joint solution of common problems existing for geographical, economic, cultural, political, or security factors [1].

Comprehensive, well-functioning border area cooperation between adequate partners is an important aspect in the preparation and resolution of emergencies on both sides of the border. Its aim is to help citizens of the border area regardless of state borders, using the nearest available help centres. There is no uniform organizational structure of fire brigade organizations in the European Union. The differences in the structural set-up of fire brigade organizations in the Czech Republic and in the Federal Republic of Germany create obstacles in border area cooperation [2]. Natural disasters such as hurricanes, floods or fires affect entire territorial units, regardless of state borders. With the mutual coordination and cooperation of rescue services from both countries, emergencies can be resolved much more effectively and quickly. In many cases, exchanging information on impending emergencies or disasters, the consequences of which could transcend national borders, is all that is necessary. This allows the rescue services to adopt measures to mitigate the consequences of the emergency, or prepare preventive measures.

1. Fire Rescue Service of the Karlovy Vary Region

In association with the establishment of regions on 1 January 2001, the Fire Rescue Services of regions with individual Territorial Divisions (former districts) were established on the same date according to the new regional arrangement. The Fire Rescue Service of the Karlovy Vary Region consists of a total of three Territorial Divisions, namely Karlovy Vary (regional directorate), Sokolov and Cheb. On the basis of the determined area coverage [3, 4], there are a total of 93 fire protection units in the Karlovy Vary Region, of which eight are professional fire protection units and the rest are volunteer fire brigade units. The professional central fire stations are in Karlovy Vary, Sokolov and Cheb, and the other fire stations are in Toužim, Kraslice, Sokolov, Aš and Mariánské Lázně.

1.1 Organization of fire protection units in the district of Cheb

The Cheb Territorial Division has one central fire station in Cheb, with two 1+3 teams, a fire station in Mariánské Lázně, with one 1+3 team, 1+1 reinforcement units, and a fire station in Aš, which has one 1+3 team. The professional Railway and Road Administration (railroad firefighters) is also deployed in Cheb, with one 1+3 team and a 1+1 reinforcement unit with special equipment (crane, rescue car, equipment for derailing railway wagons and locomotives). There are also 18 volunteer fire brigade units here.

The Cheb fire station is intended for interventions in traffic accidents and interventions associated with hazardous substances. It has a special technical car for disposal of leaked hazardous substances in all states, both on the road and on water surfaces. In the Karlovy Vary region, the Cheb fire station is a detachment for work on water and rescuing people from water surfaces. It also pumps high volumes of water (up to 5,000 l/min) and transports firewater over long distances (up to 2,000 m) with high-capacity pump Hytrans Fire Systems Somati.

The Mariánské Lázně and Aš fire stations also intervene in traffic accidents. The fire station in Mariánské Lázně also has special technology for searching for and transporting injured people in difficult terrain (Arctic cat quad bike). The Aš fire station has an "evacuation" Tatra T 815, which is used to evacuate people (20 seated people) during floods or in hard-to-reach terrain during extreme weather conditions.

2. Organization of fire protection units in the Tirschenreuth district

In terms of area coverage by fire protection units, the district is divided into three areas: Bereich West (western area), Bereich Mittle (central area), Bereich Ost (eastern area). There are a total of 120 units of the volunteer fire brigade (Freiwillige feuwehr) and 2 units of the company volunteer fire brigade (Betriebs feuwehr). These volunteer fire brigade units are housed in the glassworks in Mitterteich and in the Siemens industrial facility in Kemnath. The fire protection units are alerted from the operating centre in Weiden (Integrierte Leitstelle Hochfranken Weiden). The size of each volunteer fire brigade unit depends on the area coverage and the size of the municipality in which it is established. In smaller municipalities, there are only a few firefighters with a transport vehicle with basic equipment or a fire hydrant. In larger cities, fire departments have a fire engine, a transport vehicle and high-altitude technology (usually car ladder). Large cities are a fulcrum for special activities throughout the district. They have special technology that they take care of and use for special training and exercises. The Tirschenreuth volunteer fire brigade is intended for major interventions associated with the leakage of hazardous substances. It has two special technical vehicles (chemical and decontamination). The volunteer fire brigade unit of Waldsassen has a hose vehicle for long-distance transport of water in hard-to-reach terrain with an elevation gain. The vehicle is equipped with a special type "B" pump and hose in a total length of 2,000 metres. The volunteer fire brigade unit of Wiesau has a special command vehicle designed for communication and management of fire protection units in the event of large-scale emergencies or natural disasters that have affected a larger area.

3. Development of border area cooperation at the Fire Rescue Service of the Karlovy Vary Region

After the new territorial organization of the Czech Republic in 2000, the Fire Rescue Service of the Czech Republic was also established in its current formation. Immediately afterwards, the Fire Rescue Service of the Karlovy Vary Region initiated activities aimed at resolving emergencies at the border area in the sense of cooperation with the Federal Republic of Germany. In the conditions of the Karlovy Vary Region, these specifically include the Free State of Saxony and the Free State of Bavaria. When the Czech Republic joined the European Union on 1 May 2004, the situation became simpler. Customs inspections of fire equipment were no longer required, which facilitated the cooperation and moved it to the next stage. The Czech Republic's entry into the Schengen Area was a milestone in further facilitation of cooperation. Since then, it is no longer required to only cross borders at border crossings; this allowed the selection of other suitable places in the Karlovy Vary region for crossing the state border, including field and forest roads, which made the assistance provided more efficient, faster and easier. Additional resources for technical interventions in large-scale emergencies were provided in 2005. The agreement between the Fire Rescue Service of the Czech Republic and the federal organization Technische Hilfswerk (Technical Assistance Organization) enabled the deployment and use of their forces and resources (technical equipment from heavy equipment and emergency bridges to rear security, including field accommodation and kitchens). Since 2007, agreements have been concluded between the Karlovy Vary Region, the Fire Rescue Service of the Karlovy Vary Region, government regions in the Federal Republic of Germany, and border area municipalities on both sides of the border. The agreements concern the provision of border area assistance and cooperation in fire protection [5, 6].

3.1 Reasons for cooperation in the field of fire safety

With the development of the Euroregions, in border area has increasingly expanded in various policy fields. One of those fields is fire safety. There are several reasons for that. In the course of time, disaster relief and crisis management has received increasingly more attention. The risk of incidents in society has increased due to the increasing interdependence between governance, ecology, culture, technology and economics. This interdependence is influenced by the changing nature of disasters. New threats, such as flu pandemics and terrorism, have extended disaster management to crisis management. In addition, the German and the Czech fire brigades, for example, continue to cooperate during the corona crisis by remaining on standby for each other. The advantages of border area cooperation in the field of fire safety are the greater choice of resources, (financial) means, forces, skills, knowledge and methods about security [7, 8].

3.2 Current cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Dealing with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Martin TOMÁŠEK

Since 2010, there have been a number of small meetings in the Karlovy Vary Region between the leaders of the Fire Rescue Service of the Karlovy Vary Region and representatives of border towns and municipalities, especially on the Bavarian side. However, the highest level of cooperation has been between the fire protection unit from the Cheb fire station and the volunteer fire brigade unit from Waldsassen (Tirschenreuth district). Both the commanders of both fire protection units and town representatives were in favour of the cooperation. Units are gradually becoming acquainted with the fire protection area, and joint training and interventions on both sides of the border are being carried out. Figure 1 shows the fire protection area of the Cheb fire station, which is limited by the state border. The same is true for the volunteer fire brigade unit from Waldsassen and Neualbenreuth.



Fig. 1 Fire protection area of the fire protection unit from the Cheb fire station [9].

In February 2014, a meeting was held in Nový Drahov to discuss deepening border area cooperation in fire protection between the Fire Rescue Service of the Karlovy Vary Region, border towns and municipalities in the Federal Republic of Germany (Saxony and Bavaria) and the Czech Republic. The purpose of the meeting was to learn other intentions in the field of border area cooperation, especially the possibility of including fire protection units in border areas in fire alarm plans of individual border area regions on both sides of the border. The negotiations followed the Agreement on the Provision of Assistance and Cooperation in Fire Protection concluded between individual towns and municipalities in 2005 and 2010. The aim of the meeting was also to establish real cooperation for common interventions (fires, traffic accidents, technical interventions) so that citizens on both sides of the border receive assistance in the shortest possible time with available technical means.

Another meeting was held on March 2014 in Karlovy Vary. At this meeting, specific cases and irregularities were discussed, such as: insurance of firefighters and equipment, the use of light and sound warning devices, the use of a radio network, the method of sending fire protection units to emergencies, contact lists, lists of mobile fire equipment, etc.

The inclusion of German fire protection units in the Fire Alarm Plan of the Karlovy Vary Region was an important milestone in border area cooperation. This was achieved on 5 August 2016 with the Regulation of the Karlovy Vary Region no. 7/2016, which stipulates the Fire Alarm Plan of the Karlovy Vary Region. Figure 2 shows the fire protection area of fire protection units from the Cheb fire station after the conclusion of agreements on the provision of assistance and cooperation in fire protection.



Fig. 2 Fire protection area of fire protection units from the Cheb fire station [9].

The fire protection area of the fire protection unit from the Cheb fire station has thereby expanded, thus also expanding the operational scope and enabling quick assistance. This also increased the availability of special equipment for fire protection units, which can arrive at the scene of emergencies much faster, allowing quick elimination of consequences of these events or natural disasters. The same is true for the volunteer fire brigade unit from Waldsassen and Neualbenreuth.

4. Concluded contracts and agreements

The conclusion of agreements and contracts at a national level, which began after November 1989, is an important step towards border area cooperation. At first, however, it was a matter of getting to know each other and establishing mutual relations and cooperation, and only then did the crossing of state borders come into play. The agreement concluded in 2000 on mutual assistance in the event of disasters was also an important step. A list of the abovementioned documents is provided below [10]:

- Agreement between the Czech and Slovak Federative Republic and the Federal Republic of Germany on good neighbourliness and friendly cooperation of 27 February 1992.
- Agreement between the Government of the Czech Republic and the Government of the Federal Republic of Germany on border traffic on hiking

Dealing with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Martin TOMÁŠEK

trails and tourist zones and on crossing state borders in special cases of 3 November 1994.

- Agreement between the Czech government and the government of the Federal Republic of Germany on border crossings at the common state border of 18 November 1996.
- Agreement between the Federal Republic of Germany and the Czech Republic on Mutual Assistance in the Event of Disasters and Major Accidents of 19 September 2000.

The above documents were a major step in the establishment of border area cooperation between individual regions in the Czech Republic bordering the Federal Republic of Germany. Agreements on border area cooperation in fire protection concluded between the Fire Rescue Service of the Karlovy Vary Region and the Free State of Bavaria, or the district of Tirschenreuth [10], are listed below:

- Agreement on the provision of assistance and cooperation in fire protection between Cheb, Waldsassen, the Fire Rescue Service of the Karlovy Vary Region and the Karlovy Vary Region of 26 April 2010.
- Agreement on the provision of assistance and cooperation in fire protection between Cheb, Neualbenreuth, the Fire Rescue Service of the Karlovy Vary Region and the Karlovy Vary Region of 26 April 2010.

The Fire Rescue Service of the Karlovy Vary Region and the Free State of Bavaria have also concluded further agreements on border area cooperation in fire protection with districts Hof and Wunsiedel im Fichtelgebirge.

5. Joint training

One of the conditions for the fire protection unit's action readiness is that its firefighters must undergo regular training. Definitions and types of training that firefighters of fire protection units must undergo are provided in [4]. The purpose of the training of fire protection units is to help maintain and deepen the professional knowledge and practical skills of intervening firefighters, which will lead to the successful management of an emergency and the safety of intervening firefighters as well as others. The current legislative environment on both sides of the border shows that fire protection units from both countries undergo regular training. However, experience has shown that they are trained in a different way, they have different mobile firefighting equipment and technical equipment, and a different approach and tactics for dealing with the same emergencies. The aim of joint training in international cooperation is:

- To get acquainted with technical equipment of fire protection units, to verify their functionality and applicability.
- To get to know and understand the different tactics of intervention management in the same type of emergency.
- To focus on mutual cooperation in joint intervention.

- To get acquainted with potential sources of risks in the fire protection area of both fire protection units.
- To overcome the language barrier and set up an intervention communication system.

The setup and topics of training between the assessed fire protection units at the border area of both partners are based on the nature of the area and the potential dangers. These are most often traffic accidents and fires. Given the different tactical procedures in interventions and technical equipment used to deal with emergencies, it was decided that joint training and exercises are necessary on both sides of the border. For the above reason, fire protection units undergo four joint training sessions every year (two in the Czech Republic and two in the Federal Republic of Germany). The joint training was first aimed at getting acquainted with the tactics of interventions, subsequently focusing on the technical equipment used in the same intervention. First, each fire protection unit worked separately on a pre-assigned task, and then they worked together while their cooperation and communication was monitored. Over time, it has proven to be more beneficial when each fire protection unit is given a separate task to complete.

6. Joint interventions

One of the objectives of the European Union focusing on border area cooperation between neighbouring countries is mutual assistance in fighting fires or providing technical assistance. This mutual assistance is used if the fire cannot be extinguished with the country's own forces and resources, there is a risk of the fire spreading to the neighbouring country, or special equipment is needed to extinguish the fire, rescue people, and provide technical assistance or assistance in traffic accidents.

The coordination of fire protection units and integrated rescue system units at the site of intervention and in the area of the anticipated effects of the spread of an emergency in the Czech Republic is always carried out by the intervention commander. Unless stipulated otherwise by a special regulation, this is always the chief of the fire protection unit with the right to command. In the event of an intervention by a German fire protection unit in the Czech Republic, the chief of the German fire protection unit (Gruppenführer) is directly subordinate to the intervention commander and he must follow his instructions. If a fire protection unit from the Czech Republic intervenes in the Federal Republic of Germany, it is subordinate to the intervention commander (Einsatzleiter) of the German fire protection unit.

Figure 3 shows the total number of joint interventions of fire protection units for the monitored period 2012 - 2020.

Dealing with emergencies in border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and the Tirschenreuth district

Martin TOMÁŠEK

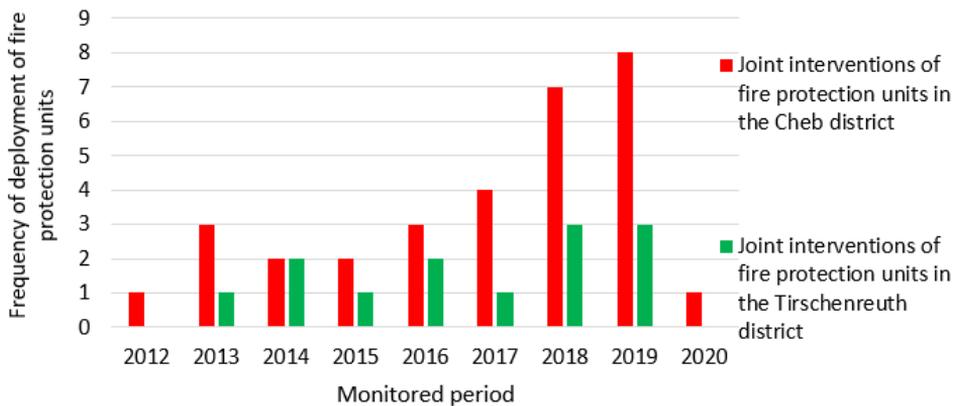


Fig. 3 Total number of joint interventions of fire protection units [11].

Figure 3 shows that the frequency of joint interventions in the Czech Republic has a rising tendency. Fire protection units most often intervened in the Cheb district in the case of extensive, long-lasting fires, when it was necessary to supply a large amount of extinguishing agent to the fire, as well as in fires where lots of high-altitude equipment was needed, or when the extinguishing agent had to be transported over a long distance or elevation. The increased number of interventions in 2018 in grassland and litterfall fires is due to the place of the emergency. The fires were always in border areas, spreading to both countries. Thanks to a well-chosen tactic by the intervention commander and the timely deployment of fire protection units, these fires were quickly localized and extinguished. This has a significant impact on the financial damage caused by the fire and the value saved.

The opposite is the intervention of fire protection units in the Federal Republic of Germany. Fire protection units most often intervened in fires where special altitude equipment was needed to rescue people and extinguish the fire. The low number of interventions of the fire protection unit from the Cheb fire station outside the Czech Republic is mostly due to the dense coverage of fire protection units in the Federal Republic of Germany and the available special equipment of Technisches Hilfswerk (Technical Assistance Organization). The COVID-19 pandemic resulted in a decline in joint interventions on both sides of the border in 2020.

7. Evaluation of cooperation so far

The main positive benefit of border area cooperation so far has been the inclusion of a volunteer fire brigade unit of Waldsassen in the Fire Alarm Plan of the Karlovy Vary Region and its subsequent deployment in emergencies in the Cheb region. The opportunity to draw subsidy programs to support border area cooperation, and funding international training and exercises, are also advantages.

The current border area cooperation between the Fire Rescue Service of the Karlovy Vary Region and fire protection units from the Tirschenreuth district has several forms:

- Joint preparation in training and international exercises of fire protection units and components of the integrated rescue system.
- Interventions on both sides of the border.
- Cross-border cooperation in civil protection and crisis management.
- Joint conferences and meetings.
- Cultural, social and sports events organized by individual fire protection units.

There are still many problems that need to be addressed to make the original idea as effective as possible. Timely assistance on both sides of the border is usually only prevented by [2, 12, 13]:

- A different legislative environment (e.g.: ban on the use of radio frequencies without the permission of state administration).
- Language barriers.
- Different approaches to dealing with the same types of emergencies (tactics, different technical equipment of fire protection units).
- Different competencies of rescue services providing assistance.
- Different structures of intervention management principles.

Despite the above-mentioned problems, the level of the established cooperation between fire protection units in the border area is very good. All the above aspects lead to further joint meetings and conferences, which are aimed at maintaining the established rules. This may improve the already well-established border area cooperation, not only in dealing with emergencies, but also to increase the socioeconomic growth of the Cheb region.

Conclusion

This thesis addressed the issue of how the Fire Rescue Service of the Karlovy Vary Region deals with emergencies in border area cooperation. Comprehensive, well-functioning border area cooperation between adequate partners is an important aspect in preparing for and handling emergencies on both sides of the border. It aims to help citizens of the border area regardless of the state border. It is important to continue to develop border area cooperation and increase the efficiency of assistance in dealing with emergencies.

References

- [1] Sousa, Luis De. Understanding European Cross-border Cooperation: A Framework for Analysis. *Journal of European Integration*. Volume 35, 2013 - Issue 6.
- [2] Pohl-Meuthen, Ulrike. Schafer, Sylvia. *Hindernisse für grenzüberschreitende Rettungseinsätze*. Bremerhaven: Wirtschaftsverl, 2006. 104 p. ISBN-13: 9783865095732.

- [3] Act 133/1985 Coll., on fire protection, as amended.
- [4] Decree no. 247/2001 Coll., on the organization and activity of fire protection units, as amended.
- [5] Volf, Oldřich. Border area cooperation in dealing with emergencies in the Karlovy Vary region and government regions Chemnitz and Upper Franconia. Fire protection 2012: Reviewed Book of Abstracts of the XXIth annual international conference. Ostrava: Sdružení požárního a bezpečnostního inženýrství (Fire Protection Engineering Association), 2012. ISBN 978-80-7385-115-6.
- [6] Hamouz, Petr. Border area cooperation in dealing with emergencies in the Karlovy Vary region and the Vogtland district. Prague, 2017. 82 p. Diploma thesis. Police Academy of the Czech Republic in Prague, Faculty of Security Management.
- [7] Folgerts, Oddy. Grensoverschrijdende samenwerking bij rampenbestrijding en crisisbeheersing. Effectief samenwerken. Masterthesis. Universiteit Utrecht. 2011. 78 p.
- [8] Hieß, Frauke. The European cross-border Mechanism as an opportunity for Dutch-German fire safety cooperation. Twente, 2020. 81 p. Diploma thesis. University of Twente.
- [9] Mapy.cz. The Czech Republic, 2021. [on line map] [cit 17-05-2021]. Available from: <https://mapy.cz/zakladni?x=12.3770743&y=50.1893603&z=10&l=0>
- [10] Internal documents of the Fire Rescue Service of the Karlovy Vary Region-concluded contracts and cooperation agreements.
- [11] Author
- [12] Medeiros, Eduardo. Should EU cross-border cooperation programmes focus mainly on reducing border obstacles? Documents d'Anàlisi Geogràfica 2018. 25 p.
- [13] Hofinger, Gesine. Mähler, Mareike. Künzer, Laura. Zinke, Robert. Interorganisationale Kooperation und Kommunikation in Großschadenslagen. In C. Unger, T. Mitschke, & D. Freudenberg, Krisenmanagement-Notfallplanung – Bevölkerungsschutz. Duncker & Humblod. 2013. 24 p.

Autor:

¹**Martin Tomášek** – VSB – Technical University of Ostrava, Faculty of Safety Engineering, Lumírova 630/13, 700 30 Ostrava, Czech Republic, e-mail: martin.tomasek.st@vsb.cz