

Mountain rescue service in Slovenia in case of natural and other disasters

Slovenian Mountain Rescue Service (MRSS) was founded in 1912 as part of the Slovenian Mountain Club. Its role was to prepare its members for mountain rescue actions and being able to provide first aid. Through the history the tasks of MRSS changed with new ones being added.

In 1994 the Slovenian Government has adopted the Act of the protection against natural and other disasters which also regulates the status of MRSS. The Act expanded the role of the MRSS into providing help, rescuing and protecting people and their property in cases of natural and other disasters, in and out of mountain areas.

The new status of the MRSS also enabled obtaining state-funding which are based on an annual contract between the MRSS and the Administration for civil protection and disaster relief (ACPDR).

Another major financier is the Foundation for invalid and humanitarian organization (FIHO) - which provides funds originating from games of chance and Slovenian Lottery. And it was just in obtaining these funds that the problematic status of MRSS came to light (MRSS primarily had a status of a Commission at the Slovenian Mountain Association), since the status of a humanitarian organization can only be obtained by an independent entity of rescue units.

The Mountain Rescue Association of Slovenia (MRAS) was established in 2006 and it consists of 17 mountain rescue units. Each unit functions within its region. The units cover all territorial regions of Slovenia. MRAS is an A member of the ICAR.

The Commission for mountain rescue service (MRSS) is still active as part of the Alpine Association of Slovenia and is a B member of ICAR.

Civil protection in Slovenia

The disaster management system is organized under the Administration for civil protection and disaster relief (ACPDR) and is a constituent body of the Ministry of Defence Republic of Slovenia (MDRS) and stands as one of the three pillars of national defence. It performs duties of administrative and professional protection, rescue and relief tasks as well as other tasks regarding protection against natural and other disasters. There are 13 ACPDR units operating in Slovenia (Ljubljana, Kranj, Nova Gorica, Koper, Postojna, Novo mesto, Brežice, Trbovlje, Celje, Ptuj, Murska Sobota, Maribor and Slovenj Gradec). The locations of the units were decided not only on geographical, urban and interventional features, but also following a risk assessment and the potential for a timely and effective response to various emergencies. A 24-hour duty service, that can be reached free of charge by calling the number **112**, is performed within each regional Notification centre. After a call is placed, the centre then notifies the unit (or units) for the emergency at hand.

For example: in the case of mountaineering accident, the notification centre uses the pager system to activate the mountain rescue team that is responsible for rescuing in the region of the accident.

Based on the new organization and classification of posts, ACPDR is divided into Bureau for

Prevention and Operative Affairs, Bureau for Education and Training, Sector for Informatics and Telecommunication, International Relations Department and General Affairs Department.

The current organization enables ACPDR to provide administrative-technical tasks of protection, rescue and relief in a unified, efficient and economical way. The reorganization also increased the operational efficiency and the effectiveness of the entire disaster management system.

The rescue units are organized by local communities, the state and specific companies. The state and the local communities organize their forces depending on a threat assessment posed to their region while the companies organize them based on the threat posed by their activity.

The tasks of protection, rescue and relief in cases of natural and other disasters are performed by: **Societies and other non government organizations**, as directed by a competent authority or local government body.

Companies, institutions and other organizations, as decided by a competent authority of the local community or state authority based on the risk assessment of the activities they perform.

Units, services and civil protection agencies. Units and civil protection services are organized on the basis of civic duties as supplementary forces to help protect, rescue and relieve. They are organized by the state, local communities, companies, institutions and other organizations under the criteria for organizing, equipping and training forces for the protection, rescue and assistance in accordance with the organiser's needs. The units and civil protection services help ensure the implementation of certain large-scale tasks of protection, rescue and aid in cases of major natural and other disasters that can't be handled by existing rescue services.

The Police are involved in the tasks of protection, rescue and assistance in accordance with their mandate defined by law, particularly in providing security, law and order and participating in aerial rescue operations.

The Slovenian Armed Forces participate in the tasks of protection, rescue and assistance in accordance with the mandate given by the law, their organization, equipment and training. The units involved in carrying out the tasks are, in particular aviation units, units for chemical and biological defence, engineering units and medical service units, if they are already not engaged in carrying out defensive duties.

Based on how the individuals are integrated and organized into the Civil defence, rescue and assistance system, we can form three groups:

voluntary (Mountain Rescue Service, voluntary fire fighters, Red Cross, Slovenian Caritas, rescue dog handlers, Scouts, speleological rescue service, etc..)

professional (professional fire fighters, public health service, public service social care, public veterinary services, ecological laboratory, mobile meteorological unit) and

functional (this group consists of certain companies, institutions and other organisations, which are, based on the nature of their activities, involved in the system of civil defence). Individual units and departments may be organized in a combination of professional and volunteer members.

All rescue forces are linked into a single system which simplifies the supply and management and the joint use of telecommunications and other infrastructure.

Following are a few cases where mountain rescuers played a vital role in carrying out the tasks of

protection, rescue and relief.

Landslide Stože

The western part of Slovenia, especially Posočje, suffered heavy rainfall in the year 2000. The 30-year monthly average was exceeded by 250%, with daily averages also substantially exceeded. This led to a number of landslides, one of them being Stože near Mangart which triggered on November 15th at around 1PM. The debris was stalled by the river Predelica's channel. Debris flows are becoming an increasingly more dangerous hazard in mountain regions of the world; this may also be due to climate changes. Debris flow can be described as a rapid movement of earth masses or debris with significant water content due to gravity forces. The possible causes of debris flow initiation are:

1. land sliding down slopes,
2. erosion of landslide deposits on steep valley bottoms or in stream or torrent channels,
3. erosion and washing of bare soils, or a combination of these.

A debris flow can erode a valley bottom or a stream channel and its banks, and transport huge amounts of sediments.

The Bovec Civil Protection headquarters reacted immediately and ordered the evacuation of 5 houses that were in imminent danger. The heavy rain continued, triggering a second landslide on November 17th that slid with great speed for around 1000 meters of altitude, burying roads, bridges and houses, resulting in 7 villagers losing their lives.

Following this tragedy the Slovenian Civil Protection Headquarters, with all available technical and rescue teams, joined in on the site. The danger to local inhabitants remained due to about 2 million cubic meters of landslide material that was still on the slope above. Seismic activities are also very common in this area and a strong earthquake was recorded on November 20th.

Due to the lack of a presence of an automated warning system, the mountain rescue teams were responsible for monitoring the potential movements of the critical landslide material. They were also, along speleological teams and rescue dog handlers, responsible for searching for the missing villagers. This task was made difficult by the wet sludge.

The incident also showcased certain technical problems which were later removed.

Due to the natural limitations of the valley area, the communications system was disabled until a mobile repeater was installed.

Due to the unreliability of the automatic alarm system a month long observation of the remaining landslide material was needed.

Up to this day, technical services of the Civil Protection use their expertise to help the villagers to reconstruct and rebuild the facilities, allowing them to carry on with their daily lives.

Floods of 2007

The heavy rainfall that occurred in Slovenia on the September 18th 2007 caused severe flash flooding in the northwest and northeast parts of the country. It is normally expected that the

return period of such flooding is only every 250 years. People were caught by surprise and were not able to protect their personal property. Most of them were just lucky to survive. 6 people died in the floods. The hardest hit by the flooding were in Železniki and Kropa.

Strong rainfall was forecast for that day, but no one expected so much rain in such a short time. As the waters rose very quickly, no preventive measures could be taken to prevent the rivers from overflowing. More than 4320 houses, 970 farm buildings and 192 commercial companies were flooded. 430 landslides occurred, and there was also severe damage to public infrastructure, mainly roads.

Rescue units at local, regional and state levels were engaged in the rescue effort and provision of basic conditions for life in the flooded areas. Most of these activities were carried out by regular services, such as professional and volunteer fire fighters and contract engineering companies, who were first in the affected area. Members of Civil Protection, who are called up in cases of disaster, and other rescue units also participated in relief activities.

One of the key tasks of those efforts was the rebuilding of infrastructure. As many as 350 km of state roads and 1600 km of regional roads were damaged, and 147 bridges were taken out. Widespread mudslides also took down many power lines, leaving many without electricity. Power was restored fairly quickly to most residents, but thousands of homes were left without drinking water. A number of homes had to be evacuated because of concerns about further mudslides.

Since the scope of the disaster was enormous, the potential of the Slovenian Armed Forces was activated in the response phase. They provided helicopter support and helped assuring drinking water and food for remote villages that were cut off as a result of road damage.

A few additional facts about these floods:

Due to flooding, the town of Velenje, with its 30,000 residents, was cut off from the rest of Slovenia for one day.

These floods happened just as international scientists were being awarded the Nobel Peace Prize for their work on the topic of climate changes. One of scientists was from Slovenia too.

Sanitizing the area of a plane crash

In 1981 a Slovene airplane crashed into the San Pietro Mountain over Ajaccio on Corsica, killing 180 passengers and crew members.

After the decision of the Slovenian Government to look into options that would enable a sanitization of the area, the Administration for Civil Protection and Disaster Relief started gathering data in 2008. As part of this process a special expert group visited Corsica to inspect the crash site. The inspection led to the conclusion that the sanitization of the area will be a demanding, yet doable task.

By the executive decision of the Slovenian Government, the sanitization would be conducted in May by a temporary operational Civil Protection group of consisting of 60 mountain rescuers, fire fighters, with additional members of the Civil Protection and added areas support from the

Slovenian Armed Forces, which enabled the gathering of the remains of the San Pietro slope. In the course of the sanitization 27 tons of plane debris, or 69 large transport bags which weight from 100 to 400 kg, were gathered. Additionally 30 major airplane pieces were transported to the collection point.

The whole sanitization was executed in co-operation with the local, Corsican and national French authorities. The operation was completed by the end of May with the placement of a memorial plaque. Families of the deceased, representatives of the local authorities and the Slovenian Defence Minister also took part in the unveiling of the memorial plaque.

So, at the end of this presentation of the Slovenian system for civil protection and disaster relief, we need to look forward and ask ourselves what can be done to prevent such accidents from happening again?

Sadly, there is no positive answer to this question. Not only Slovenia, but the rest of the world has even recently seen many floods, strong winds, landslides, high snow, avalanches that have damaged or destroyed crops, property and taken lives.

Yet this can serve as a grave reminder to respect the Earth and be prepared to try harder and do our best to help those in need.

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