

Presentations Terrestrial Rescue Commission

Place: Zakopane, Poland

Date: October 10, 2019

Time: 0930 hours

Participants: Members of the Terrestrial Rescue Commission

Member of the Avalanche Rescue Commission (from 0930 to 1000 hours and 1430 to 1500 hours)

Members of the Air Rescue Commission (from 1600 to 1700 hours)

Members of the Dog Handler Commission (from 1600 to 1700 hours)

Members of the Alpine Emergency Medicine Commission (from 1600 to 1700 hours)

Chairman: Gebhard Barbisch

Minutes: Fabienne Jelk

Teamwork in Cross-Border Rescue Operations in the Tatras; Andrzej Marasek, TOPR & Marek Biskupič, HZS

Often, rescue operations are being executed by the Polish and Slovakian rescue organizations together as the countries border each other. Therefore, combined training is essential. The border country is mountainous and mountains don't have borders.

Rescue operations in which rescuers from both Poland and Slovakia were participating:

12.31.2005 - Avalanche, Predný Salatín: 8 people were caught in an avalanche, 5 were completely buried. 46 rescuers were involved. Seven of the 8 people died.

12.31.2015 - 3 people fell, Mięguszwiecki Szczyt Czarny: The Polish rescuers cannot fly at night, so the helicopter came from Slovakia and helped evacuating the people.

06.25.2015 – Fall of a tourist, Baranie Sedlo: A tourist fell 200 meters. It was foggy. The Polish helicopter was able to evacuate the person eventually.

01.13.2016 - Avalanche, L'adový štít: Flying was impossible from the Slovakian side but the Polish helicopter was able to fly. The person survived.

08.17. – 09.17.2019 – Cave accident, Jaskinia Wielka Śnieżna: 2 people had to be rescued from a cave. The rescue was very difficult. 13 HZS rescuers and 65 TOPR rescuers were involved. Pyrotechnical personnel from Slovakia were needed, too, for blasting operations.

06.08.2017 - Climbing accident, Gerlachovsky štít: 2 climbers. One was evacuated by helicopter.

05.07.2018 - Javorová štrbina: The Slovakian helicopter couldn't evacuate an injured person, but the TOPR helicopter was able to undertake a winch rescue.

From 2015 to 2018 there were 25 combined helicopter operations in the Tatras. The avalanche bulletin is also published in collaboration with both rescue organizations. Data is exchanged.

Questions/Comments: None.

Presentation: 20191010-01-Mountains-do-not-know-borders.pdf

Incident Command Systems – Features, Functions and Failures; Alistair Read, WG-ICS

The Command System's purpose is to facilitate cooperation during rescue operations.

Case example:

Missing helicopter, March 27, 2017. The helicopter was scheduled to fly from Cranfield to Dublin. ETA in Dublin was 1300 hours. By 1600 hours the helicopter was reported missing. Helicopters from England and Ireland flew searches. The police were trying to locate the cell phones. On March 28, 2017 they found the crash site. No survivors. The weather during the search was very bad.

There were many participants:

- International
UK-Eire ARCC, Coastguard, and victim assistance from both countries
- National
Police, Coastguard, ARCC, identification of the victims, aviation accident investigation authority, Military SAR
- Regional
Police, mountain rescue, coroner
- Local
Police

How does ICS help?

- Collecting and evaluating information.
- Ensuring a clear chain of command, which is usually a problem at the beginning of an operation.
- Scaling work (from local to national and international). At first, geographically, 2 countries were involved but then it was reduced to a small mountain in Northern Wales.
- Combining labor efforts.
- Decision finding and communication. This was very important as communication had to be done across countries.
- Legal support (cooperation with investigative authorities).
- Flexibility.

Questions/Comments: None.

The Incident Command System Workgroup; Dan Hourihan, WG ICS

Operational process:

LAST

L Locate

A Access

S Stabilize

I Transport

The ICS workgroup was founded in Andorra to clarify which systems are used by the different countries and to find the best solutions if issues are found.

The following problems exist: chaos, missing information, incorrect information.

Questions/Comments: None.

Presentation: 20191010-03-Hourihan-ICS.pdf

Recommendation ICS – Draft – Presentation and Discussion; Ásgeir Kristinsson, WG ICS

Why ICS (Incident Command System)? With planning, better results can be achieved.

What is needed for good teamwork? Well-trained personnel with good work ethics. They want to know and understand what their role is, they want to work with rescuers who understand their roles and are competent, they want to get the work done efficiently, they want the best possible outcome, and they want to come home safely afterwards. To ensure all that, a good system is needed. It should be simple, understandable, realistic, translate into practice, and be based on proven tactics.

Recommendation: The system (plan on how to proceed) must not be changed or canceled during the operation. The system must be applicable for both small and big events. Everyone needs to understand the system and be able to apply the system. The system needs to be applicable to all circumstances (land, air,

sea). There can only be one system. The systems of different countries need to be compatible. Communication is imperative. Data and information need to be exchangeable between countries.

Points which the workgroup will be working on: Defining what needs to be included in the system; deciding how far we want to go in the next recommendation; pay attention to critical points (registration and taking minutes, exchange of information, defining key positions). Collaboration of the delegates is necessary (bringing in new ideas, pointing out problems that could delay the project, comparing the recommended system with past operations).

Questions/Comments: None.

Presentation: 20191010-04-ICAR-ICS-2019-Asgeir-Kristinsson.pdf

Development of Rescue-Supporting Technologies; Jakub Hornowski, TOPR, Pawel Rościszewski, Paga Solutions, & Jan Staszuk, NeoSoft SAR

30-40% of rescue operations start with a search. The Rescue App was developed so that victims can answer the following questions: Where are you? Who needs to be called? Emergency numbers? The App relays the location of the victim to the rescuers. The victim can call the rescuer. The battery charge level of the cell phone is transmitted. A text or link for the App can be sent to the victim. Additionally, the App relays information such as pre-existing medical conditions.

Problems: Some providers block the ability to locate the cell phone. Google and Apple are not very cooperative.

Neosoft SAR: Different devices that are used in the military were tested and checked to see if they could be used in rescue. A mobile device with antennae was developed to which nearby cell phones can connect. Text messages can be sent to the cell phone through this device. The cell phone does not need network coverage. Legal aspects still have to be clarified.

Questions/Comments: None.

Presentation: 20191010-05-Neosoft-SAR.pdf

Operation Mangatawai – August/September 2017; Peter Zimmer, LANDSAR NZ

The operational area is thickly forested. The rescue operation lasted from August 13 through September 9, 2017. Two men were missing. They had stolen a vehicle and fled. Eventually, they abandoned the vehicle and continued to flee on foot. They got lost and called the police on August 13 to ask for help. The search included infrared cameras, helicopters and dogs. 7 police teams with 2 dogs were mustered. On August 13 they found a campfire with clothes and a meth pipe. The search continued on the third day with 11 teams. Several items like gas bottles, socks and such were found. On the fourth day, 12 teams with dogs, police, and military continued the search, in which they found a lot of trash. On day 7, 101 people were involved in the search, some volunteers. The media started to be interested in the case. Divers were also used. On days 11 and 12, cadaver dogs were also used, but they found nothing. The missing men were found on September 9. One person was found in the river (Mangatawai Stream), the other was 20 meters away; neither survived.

Participating teams: LANDSAR NZ, volunteers, NZ police, military, Ngati Tuwharetoa (spiritual and psychological support for families and rescuers).

Questions/Comments:

Q: Red Alistair: Was it possible to do a linear search?

A: Along the river, yes. It was more difficult between the rivers.

C: Gebhard Barbisch: Sometimes people escape from mental institutions, some of which may be suicidal. It is then difficult to figure out how these people behave and where they would go, which makes a search difficult.

Presentation: 20191010-06-SAR-NZ-Mangatawai.pdf

Forging a Better Avalanche Chain of Survival; Heiko Stopsack, Senior Paramedic & Director, Mt. Hood Backcountry Ski & Avalanche Institute & King County Medic One Air Rescue Unit, USA

In the USA avalanches can happen in very remote areas. Depending on the location, it can take 45 minutes until the helicopter is on scene. Are recreational mountaineers well prepared for an avalanche accident? Can the chain of rescue be improved? In a worst-case scenario, the issue lies in CPR. Should an avalanche victim be treated right away just like someone who had a cardiac arrest? Yes. ICAR should issue a recommendation in which avalanche training for recreational mountaineers includes CPR. In King County, 70% of heart patients received CPR from first responders. That is a good result. Can we achieve the same with avalanche victims? This can be attained with realistic, in-the-snow training.

Proposal: Avalanche rescue and online courses should teach CPR.

Questions/Comments:

C: Hermann Brugger: The physicians support this proposal. A recommendation should be issued that states that avalanche rescue training is implemented in combination with CPR training.

Presentation: 20191010-07-Stopsack-Chain-Survival.pdf

Should Airbags be Mandatory Avalanche Safety Equipment; Dr. Christopher Van Tilburg, Crag Rats MR Hood River, Oregon, & MRA, USA

Airbags have been around for over 30 years. ICAR states that the benefits of avalanche beacons, probes, shovels, and airbags have been proven. However, it does not state that one must use airbags. The Wilderness Medical Society Practice Guidelines state that a person going into an area at risk for avalanche should consider taking an airbag. This guideline is too weak.

Airbags reduce the mortality rate from 22 to 11% (study Haegeli et al).

Tests Meier and Harvey: Tests with dummies in avalanches. 14 out of 14 dummies with airbags were visible. Only 1 out of 5 dummies without airbags was visible. This leads to the question whether airbags aren't more important than beacons.

Other questions that arise with regards to airbags: Does the size and form of the balloon matter? Can the airbag be used to create an air pocket? Should cartouches be standardized with regards to content and connection? Should breathing systems be used in conjunction with airbags? Why are airbags not being used: size, weight, cost, training, insurance, lack of recommendations. Airbags can rescue more lives than beacons. Shouldn't ICAR issue a recommendation to make airbags mandatory?

Questions/Comments:

C: Anjan Truffer: I am against such a recommendation. It has to be differentiated between recreational mountaineers and professional rescuers. If the recommendation only applies to recreationists, that is okay, but it should not be mandatory for professional rescuers. Often times there are no airbags accessible because rescuers get picked up at random locations, and they cannot all be equipped with airbags. It's also difficult to work with the airbag as it is heavy.

Q: Delegate: What gas is being used?

A: Van Tilburg: Most airbags use compressed air, some carbon dioxide or argon, and also electronic pumps.

Q: Delegate: Can gases cause problems?

A: Van Tilburg: If the airbag ruptures, it could affect the airways. Hermann Brugger: The gases are not toxic.

Q: Delegate: Have the manufacturers done conclusive tests?

A: Van Tilburg: Yes. Airbags work.

C: Kirk Mauthner: I agree with Anjan Truffer. My team has discussed using airbags but noticed that the airbags have to be removed when digging out victims. If the airbags are not worn, they are not useful.

C: Delegate: There are new airbags which are less hindering when digging. The airbag is like a collar around the neck.

C: Delegate: How much does a helicopter operation cost? In Scotland it is 2 million Pounds.

Q: Gebhard Barbisch: Does ICAR want a recommendation? There should not be put a price on a life (in reply to the speaker stating that a life is worth 9 million Dollars).

C: Hermann Brugger: Some rescuers lose their lives on the way to an avalanche rescue. Airbags could save lives in that situation. This should be considered.

C: Delegate: ICAR should issue a stronger recommendation, especially if one considers that all 14 dummies were visible. With this data, we need to recommend to people to use airbags.

C: Felix Meier: If we issue a recommendation, we need to differentiate between the use of an airbag on the way to the avalanche and while on the avalanche.

C: Gebhard Barbisch: This question should be discussed with UIAA.

Presentation: 20191010-08-Airbag-Standard.pdf

End of Meeting: 1700 hours

For the English Translation: Olivia A. Cashner