

Case Report: Lassing Mining Accident

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Abstract

Lassing (Austria) became famous after a tragic accident that generated tremendous media coverage. On Friday July 17, 1998, in a depth of 60 meters under the surface, water and mud broke into a shaft of the mines in Lassing. This article describes the events and the rescue mission including all its successes and failures.

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INTRODUCTION

Lassing is the name of a small village in the Steiermark (Austria) that became famous on July 17, 1998. It has approximately 2,000 inhabitants. One of the main financial resources of the area is mining. The village became famous after a tragic accident that generated tremendous media coverage leading to disaster-related tourism involving thousands of people. For two weeks, the entire nation followed the news on television and print media and prayed for rescue of the buried mining workers. It was a dramatic interplay of hope and disappointment. Repeatedly, rescue efforts had to be stopped while camera images showed often no more than mud and water.

Figure 1

Image 1: Aerial picture from Lassing hours after the accident



Figure 2

Image 2: Disaster tourism



Figure 3

Image 3: Media village



What is left in our memory from this mining accident in Lassing-Austria?

- A huge hole in the earth that swallowed several houses?
- The mining worker that survived for 10 days despite all other predictions?
- The 10 mining workers that could not be rescued and still remain buried in the mines?
- The rescue leader declaring the death of all mining workers prior to rescue of the one survivor?
- The chaos that prevailed for one week?

And what is already forgotten:

- The chancellor declaring on the first day of the accident the reorganization of the professional crisis management team?
- The need for specially trained and experienced rescue leaders?
- The need for better media information?
- The need for planning disaster management for such rare accidents?

Nevertheless, Lassing became a synonym for crisis mismanagement. At least in the first, most important phase of the rescue mission all guidelines for leadership in disaster rescue had been seriously neglected. All this is topped by the fact that most mistakes were caused by selfish fights over

which group would be the lead agency. Luckily, there were exemptions to the rule: the drilling teams for example accomplished their tasks in the shortest periods of time and with professional precision. In retrospective it can be noted that the 10 missing mining workers would most likely not have been saved by better leadership. This might bring some relief for the disaster organization in charge of this accident. However, this attitude might lead to a catastrophic increase of victims in similar future accidents.

CASE REPORT

On Friday July 17, 1998, in a depth of 60 meters under the surface, water and mud broke into a shaft of the mines in Lassing. Five of the six mining workers were able to leave the mining shaft, leaving one worker behind. Shortly thereafter, inhabitants of the village reported that their houses were starting to sink into the earth. Subsequently, three houses disappear in a hole caused by collapsing mine shafts underneath. All inhabitants are able to rescue themselves. Mining specialists and workers of the mining company re-enter the mining area and try to secure the shafts. It becomes quickly evident that the remaining mining worker can only be rescued through a new drilling hole from above.

Figure 4

Image 4: Aerial picture from collapsed area



Friday, July 17, 1998

10:00 p.m.: Huge collapse of mining shafts at a depth of 130 meters buries 10 mining workers trying to secure the area. Destruction of electrical supply lines due to collapse of a street.

Figure 5

Image 5: Collapsed area



Saturday, July 18, 1998

5 p.m.: Start of drill hole to the first missing mining worker

Figure 6

Image 6: Start of drill hole



Monday, July 20, 1998

Construction of the fence around the disaster area

Implementation of a government disaster rescue organization and leadership

Tuesday, July 21st, 1998

Arrival of mining experts from Germany

Wednesday, July 22nd, 1998

Remote cameras and sound recording devices near the collapsed shafts are installed.

Noon: Hole drilled to the first missing mining worker reaching a depth of 30 meters.

10 p.m.: Village inhabitants and relatives of the victims threaten demonstrations, hoping to increase rescue efforts.

Thursday, July 23rd, 1998

Start of the new drilling towards the large cavity that potentially had been used by the victims to survive.

Friday, July 24, 1998

3 a.m.: Rapid decrease of the water level in one of the shafts making further collapses possible. Evacuation of all houses within a 300 meter perimeter.

6 p.m.: Independent and illegal drills by the (frustrated) vice Mayor of the village.

Saturday, July 25th, 1998

CO2 measurements and camera images showing nothing else but mud and water lead to the conclusion that the first missing mining worker did not survive.

Sunday, July 26, 1998

7 p.m.: Drills reach the cavity in the mining shaft.

8 p.m.: First contact with the first missing mining worker.

10 p.m.: Rescue of the first missing mining worker.

Figure 7

Image 7: Rescue of the first missing mining worker



Monday, July 27, 1998

Several new teams of mining experts from Germany join other teams from Hungary (who are standing by). No one had requested these teams to come.

Tuesday, July 28, 1998

All mining experts are assembled and coordinated by the leader of the Austrian mining rescue team.

Sunday, August 2nd, 1998

Drill reaches the main cavity near the missing 10 mining workers. No signs of survival.

7 p.m.: Search for the infrared camera with the help of the media.

Monday, August 3rd, 1998

Start of two new drilling operations.

Thursday, August 6, 1998

All drills temporarily halted in order to use sound recording devices.

Friday, August 7, 1998

The company manager collapses and has to be hospitalized.

Monday Aug. 10, 1998

Demonstrating villagers and TV reporters demand continuation of drilling.

Friday, Aug. 14, 1998

An engineer of the drill team has to be hospitalized with cardiovascular collapse.

9 p.m.: Camera images from a depth of 180 meters show no signs of survival.

Monday, Aug. 17, 1998 (one month after accident)

Rescue mission is abandoned.

Some numbers:

- It was calculated that the air needed for survival of the first missing mining worker would last only for 24 hours. It lasted for 10 days.
- The mining governmental agency declared on August 8 that an earthquake was the reason for the mining collapse. The earthquake registration office

never registered any earthquake activity at this time.

- A private investigator employed by the competition declares in front of television and media that illegal mining activities by the involved mining company caused for the mining accident. It turned out that he was right.
- Approximately 300 journalists from all over Europe were present in Lassing for about a month.
- 3000 rescue workers were involved in the rescue mission.
- Costs of additional drilling by special drill teams came up to 20 million Austrian Schilling.
- Costs for the total rescue mission are estimated at 250 million Austrian Schilling.
- Costs for the recovery of the bodies will be at least another 250 million Austrian Schilling.
- The rescued mining worker was offered one million Austrian Schilling for an interview.

CRISIS MANAGEMENT SYSTEM

Both, functional crisis management and communication management were not existent. The responsibilities for disaster management in Austria are in the hands of the state. Larger accidents are handled by the cities. Accidents in mining areas are exempted. Responsibilities for the management of such disasters have been transferred to the governmental mining agency and to the involved mining company. Half of the team of the involved company was among the missing victims. It is evident that the remaining professionals may not have enough personnel resources to successfully handle a disaster of such magnitude.

In Lassing, governmental agencies took over rescue leadership 2 days after the mining collapse. Until then, the mining company was in charge. However, neither one of the two parties was trained for professional mining accident rescue missions. All leadership positions were filled with mining professionals well trained for mining questions but without any training in crisis management or disaster rescue. Crisis management trained professionals offered their help. However, their offer was rejected.

LEADERSHIP

A clear leadership structure was missing. A variety of organizations were involved, each with its own leader: disaster relief agency of the state, the mining team, local political authorities, firefighters, Red Cross, police, and army. A clear structure and leadership was completely missing in the first, most important phase of the rescue mission. The headquarters (local restaurant) of the potential leadership authority was well marked. However, one day after the accident only two firefighters could be found sitting in a corner of the restaurant. Nothing of the following was organized in that location: resource lists about special equipment or communication tools, personnel planning, or regular information meetings for the rescue team leaders.

COMMUNICATION

Phone lines and power lines were destroyed. Cellular phones were useless due to bad connections in the valley and because the journalists occupied all potential channels. It took four entire days to build up a functional telecommunication system. Swisscom in Switzerland proved in the past that it is possible to install functional connections within two hours. However, this has to be planned ahead. In addition, the Swiss authorities have reserved special channels for rescue teams during disasters and these disrupt all other cellular phone connections in the local area.

ORGANIZATION IN THE FIELD

Chaos was predominant in the first phase of the rescue mission. Instead of good zoning in the disaster area with closure of critical areas, all involved parties (disaster relief teams, journalists, bystanders) were running across each other. Some areas were marked by “do not enter” bands. However it was not obvious which side was the prohibited area. The clear structure for disaster areas, such as described in “First Aid Station FAS” was missing.

MEDIA INFORMATION

Local authorities were completely overwhelmed by the amount of journalists and their equipment (film and satellite trucks). No organization was in place to inform and guide the media. The media trucks blocked streets and helicopters flew in journalists. Instead of organizing meetings to inform rescue team leaders, media conferences were held at the disaster headquarters location. Misinformation led to dangerous initiatives by individuals. Journalists were able to disguise themselves as firefighters or rescue workers and to enter prohibited areas in order to film rescue efforts. No thought was put into creating a support phone center for

family members of potential victims.

Figure 8

Image 8: Headquarters with media conference



RESOURCES

No resource lists were available. Nobody knew initially where to find special tools and equipment. Special equipment had to be requested through television, representing certainly one of the beneficial aspects of media coverage. However, mismanagement led to the publication of the one single phone number at disaster relief headquarters. Outgoing communications (and the performance of important tasks) by headquarters personnel were blocked for hours by the more than 800 incoming calls. Untrained personnel also had difficulty distinguishing between necessary and unnecessary special equipment.

TECHNICAL COMMUNICATION

Each organization had its own communication network. Communication between the different rescue parties was only possible by visiting each other. One can only imagine what that means having over 3000 rescue workers in the field.

CRISIS INTERVENTION -- PSYCHOLOGICAL SUPPORT

The leaders recognized early the need for psychological support and help. A psychologist and 2 social workers were called to duty. However, none of them was trained to provide psychological support in disasters. Around 11 p.m. of the night of the accident they asked if they could go back home, obviously trying to escape their own stress. Next, especially trained troops of police psychologists (trained for hostage situations) were called to duty. The small group did excellent work but was overwhelmed by the needs for support. Consequently, professionally trained support teams were called. Forty psychologists were finally working in the

field. All the support teams did excellent work. It is estimated that the psychological treatment of the victim's families will last for another two years.

INTERNATIONAL SUPPORT

Most European countries train special disaster relief teams such as the Swiss "Schweizer Katastrophen Hilfe Corps SKH" or the Austrian "Armed Forces Disaster Relief Unit AFDRU". They are available upon request from the United Nations Organization UNO in Geneva-Switzerland. However, one has to know the rules of organizing rescue efforts. Missing leadership in the disaster management led to chaotic events in regard to international support. Mining rescue teams from Hungary traveled to the site of the accident and volunteered their services. They waited without success to be involved in the rescue mission. A single German paramedic organized in his own response including 2 German army helicopters with German mining rescue teams and equipment. Austrian authorities, not expecting German army helicopters flying into their airspace, initially denied access to the disaster area. It is evident that International efforts have to be coordinated as well.

DISCUSSION

Many discussions have followed the chaotic rescue efforts in Lassing. Political authorities reconfirmed the need for organized disaster relief management and leadership. It was decided to create special mining accidents relief units, to train experienced leaders for such disasters and to create an Institute for Crisis Management at the Montan-University in Austria. Lectures offered by this university will be similar to the ones successfully held many years ago at several universities in Switzerland.

SUMMARY

It might be unclear to the reader why the author of this article has written such as negative description of a disaster rescue mission. It is certainly not the goal to discredit hard work and high emotions of the rescue teams. However, negative experiences in the field should be discussed in

order to avoid future chaos during similar disaster rescue missions. All involved rescue personnel including leadership should be able to learn and improve their knowledge and skills. Crisis management is a very difficult work and cannot be successfully accomplished without prior training.

Knowledge in the following fields is absolutely necessary for team leaders:

- Pre-incident planning of rescue responses in case of disasters
- Coordinated Incident Command System ICS (defining the chain of command among leadership from multiple agencies and coordinating the mutual aid responses – ([Click here for the article](#))
- Concept of dividing the disaster area in different disaster zones) (see "First Aid Station FAS".
- Training in management of high numbers of casualties (see "Casualty Handling System CHS".)
- Preparedness of emergency telecommunication systems
- Creation of support systems for the families of the victims (and rescuers after the response has been completed)
- Creation of media information teams
- Education in disaster relief organization and medicine

Implementation of all above cannot be achieved without money. However, avoidance of unnecessary loss of lives and financial resources during rescue missions will more than pay for the costs of good and serious disaster relief preparation.

References

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