



IKAR/CISA 2004
Zakopane – Poland
Kommission fur Bodenrettung
Commission de Sauvetage Terrestre
Terrestrial Rescue Commission

Prepared By:

Rick Lorenz
Olympic Mountain Rescue
Mountain Rescue Association
1410 South Mountain View Ave.
Tacoma WA 98465
FMLorenz1@aol.com

Dan Hourihan
Alaska Mountain Rescue Group
Mountain Rescue Association
550 W. 7th Ave., Suite 1380
Anchorage, AK 99501
danh@dnr.state.ak.us

INTRODUCTION

The International Commission for Alpine Rescue (IKAR-CISA) met for its annual congress in Zakopane, Poland between 13 and 17 October 2004. Zakopane is a winter sports resort of 30,000 inhabitants at the foot of the Tatra Range of the Carpathian Mountains, the only alpine mountain range in Poland. The meeting was hosted at the Mecure Kasprowy Hotel by Tatranskie Ochotnicze Pogotowie Ratunkowe (TOPR), the Tatra Mountain Rescue Service. Poland is very proud of its tradition in Mountain Rescue. TOPR, founded in 1909, is the fourth such organization in history after Austria (1895), France (1897), and Switzerland (1902), discounting the activity of the monks from the cloisters in the Alps who conducted rescues even earlier. TOPR did a fine job in planning and organizing the IKAR Congress in Zakopane, the capital of Polish mountaineering.

The theme of this years meeting was “Safety of the Rescuer” and presenters from around the world were required to submit proposals and papers in advance, with a standard 20 minute presentation period followed by 10 minutes of questions.

Representing the United States at Zakopane were Dan Hourihan and Rick Lorenz (Terrestrial), Dale Atkins (Avalanche), and Ken Phillips (Air Rescue). Simultaneous translation was provided for most sessions in English, French, German and



Tatra Range, Zakopane, Poland

Polish with the latest equipment and headphones, as well as sound proof booths for the translators. United States delegate attendance was made possible by a grant from CMC Rescue, Inc., in addition to support from the MRA and NASAR.

Background

Poland is an ancient nation that was conceived around the middle of the 10th century. Its golden age occurred in the 16th century. During the following century, the strengthening of the gentry and internal disorders weakened the nation. In a series of agreements between 1772 and 1795, Russia, Prussia, and Austria partitioned Poland amongst themselves. Poland regained its independence in 1918 only to be overrun by Germany and the Soviet Union in World War II. It became a Soviet satellite state following the war, but its government was comparatively tolerant and progressive. Labor turmoil in 1980 led to the formation of the independent trade union "Solidarity" that over time became a political force and by 1990 had swept parliamentary elections and the presidency. A "shock therapy" program during the early 1990s enabled the country to transform its economy into one of the most robust in Central Europe, but Poland currently suffers low GDP growth and high unemployment. Solidarity suffered a major defeat in the 2001 parliamentary elections when it failed to elect a single deputy to the lower house of Parliament, and the new leaders of the Solidarity Trade Union subsequently pledged to reduce the Trade Union's political role. Poland joined NATO in 1999 and the European Union in 2004. Poland is quickly transforming itself into a modern European country that has all the infrastructure to support tourism and visitors from around the world.

Congress of Delegates

Delegates arrived in Zakopane on the afternoon and evening of Wednesday, October 13, and the regular sessions began at 0830 Thursday morning with a grand opening and welcome lead by TOPR officials and IKAR President Toni Grab. Representatives from 29 of the 33 IKAR member organizations were in attendance, including 18 of 22 countries, and numerous international mountain rescue equipment vendors. Of particular note was the delegation from the Chinese Mountaineering Association (CMA) representing the People's Republic of China (PRC). Their attendance, in an Observer's role, resulted directly from discussions between IKAR officials and the CMA at the MRA June 2004 conference in Anchorage. The CMA stated their intent to apply for regular IKAR membership in 2005.



IKAR Pres. Toni Grab, Switzerland

Following the welcome and Toni Grab's introductory remarks, the four Commissions broke into individual sessions to conduct business relative to their respective disciplines.

Terrestrial Commission Issues

Terrestrial Commission President Bruno Jelk, Switzerland, lead this session, which covered routine Commission business items including the approval of Commission minutes from the October 2003 IKAR Congress in Coylumbridge, Scotland and the joint Avalanche/Terrestrial Commission December 2003 workshop held in Diavolezza, Switzerland. One day of glacier rescue scenarios and two days of avalanche workshop activities framed the Diavolezza meeting. Go to Terrestrial Commission minutes at: <http://www.ikar-cisa.org>

Louis Salzmann, Switzerland, coordinator of the IKAR "Project Futura 2010" gave a brief overview of the projects goals and objectives and described the language based group workshop approach to be used in this long range planning effort scheduled to take place during the Zakopane meeting. A full synopsis of the workshops will come later in this report.



Bruno Jelk (L) and Toni Grab

Commission Vice-President Gebhard Barbisch, Austria, detailed recent revisions to the IKAR website and presented an online navigational tutorial of the site. Much of the site is open to public access, however, the discussion page, as well as certain member contact listings do require access authorization. All current U.S. delegates have access to the entire site and will coordinate access for those without upon request.

A discussion of the pros and cons of "standardization" took place and it was moved and adopted that the normal "European" values will be used in any standardization recommendations, rather than a separate IKAR standard language. Additionally, Dan Hourihan was named as the contact point for questions regarding mountain rescue standardization developments in the U.S.

Bruno Jelk postponed a decision on scheduling a Terrestrial Commission working meeting later in the year pending the results of the Project Futura 2010 planning sessions. Croatia indicated a willingness to host such a workshop, if scheduled.

Main Presentations

For Thursday morning sessions Terrestrial Commission met separately.

Presentation #1: Polish Mountain Rescue "Safe in the Mountains", a current successful program aimed at Polish youth and teenagers to promote mountain safety. It involves primarily an interactive computer program that gives young people a mountain safety certificate through distance learning. Developed at no cost to the users by a commercial company, 1,800 young people completed the course with a 70% pass rate. The program has three modules including 1) education and prevention of danger for travel in the mountains 2) first aid and CPR and 3) education for mountain emergencies. The last module included a survival package and the building of emergency shelters. In the past year there were 14,000 registered users, indicating a large number of people gained some useful information. A demonstration version of the software was used to demonstrate the use of an interactive rescuer who provided both written and oral instructions.

Comment: The major deficiency in the program seems to be its lack of practical application. The first aid and CPR module asks that the student conduct practical exercises with the local teacher or another institution, but there is no method of ensuring it will be done. On the other hand, the fact that the information is provided at all is a benefit, and there seems to be no expectation that a person with a “safe in the mountains” certificate can actually perform CPR. The main value in the program seems to be the success in getting basic mountain safety information to young people in a user friendly manner. The company that developed the program is anxious to market the program to other organizations, and they stated they would make a demonstration version of the program (in English) available at their website, see <http://www.esynergia.pl>

Presentation #2: Swiss ZKGS “Rope Failure in High Line System”, an incident report with some lessons learned from an operation run by the Swiss military. A dual rope high line was constructed to transport fifty soldiers across a seventy meter gorge. Anchors were set at three points on each bank by drilling into the rock in classic European fashion. A patented double pulley wheel was used to transport one person at a time in a basket-like device. Chafing gear was used to cover a jagged rock at a point where the rope was most exposed to damage. But after twenty soldiers were transported across the gorge, one of the ropes failed at a point that was determined to be more than a meter beyond the jagged rock. No injuries were reported due the presence of the second rope. The failed rope is now undergoing tests at the Swiss standards lab to determine the cause of failure. A number of “lessons learned” were suggested by the presenter: 1) a double rope is necessary 2) the location of the anchors should be carefully planned 3) the “edgepro” should be carefully chosen and placed and 4) care should be taken to check the system after multiple repetitions.



Comment: Although the actual cause of failure was stated to be “unknown,” a number of risks were present, including the apparent inexperience of the crew. From the photo of the anchor system, an unusually complex system of ropes seemed to contribute to some confusion at the scene, abrasion of the rope, and ultimate system failure. The suggestion for a thorough safety check after continued use was certainly valid.

Presentation #3: Swiss Alpine Club “Occupational Safety for Rescuers.” Dominique Hunziker was the presenter, he stressed the need to maintain safety standards throughout the mission and that safety cannot be delegated to anyone. Safety of rescuers should always be the highest priority. By carefully planning before the mission the leader is properly able to recognize risk and minimize its impact on the mission. Risk in a rescue mission is similar to that encountered in mountaineering, risk can generally come from three categories, the human factor, the material factor, and from the environment. The material (equipment) factor is generally easiest to eliminate, with proper planning and the use of quality equipment. Although the weather is beyond the control of the rescuer, missions can be timed to minimize risk. The human factor often proves most difficult, with decisions dependent on a number of subjective factors.

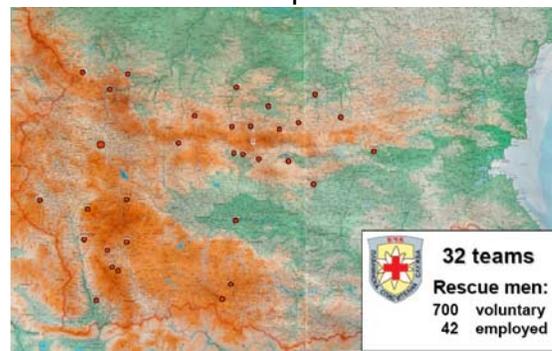


Goal vs. Risk: Is the decision responsible?

There may be a number of alternatives in dealing with risk, in some cases the risk can be removed, such as the replacement of a defective piece of equipment. In other cases the risk can be avoided, such as the marking of a dangerous point on a climbing route. As for the human factor, proper planning and training can reduce but not entirely eliminate risk. Swiss rescuers sometimes use a risk potential matrix that attempts to quantify the danger based on a number of factors including weather, terrain, equipment and the experience of the rescuers. There is a suggested value placed on each factor, the evaluation leads to a sum total of risk for a particular mission.

Comment: The use of a mathematical formula for calculating risk seems to be unnecessarily restrictive. Risk analysis should be a dynamic part of the planning process that should be used, updated and evaluated as the mission develops.

Presentation #4: Bulgarian Mountain Rescue “Rescuer Safety”, In Bulgaria the mountains present somewhat less exposed and difficult terrain than other IKAR member countries, and of course the risk tends to increase with exposure of rescuers. But the same or similar questions are presented in terms of planning missions, including the question of when to start or finish a mission. In Bulgaria, the Mountain Rescue Service is responsible for all searches and rescues at altitudes above 1,500 meters, with the Police responsible for operations below that altitude. In Bulgaria the Mountain Rescue Service has 700 volunteers and 42 paid professionals.



Comment: As one of the newest members of IKAR and with considerably less resources than other organizations, the Bulgarians are eager to join in the discussion. Coordination with police in transitional jurisdictions is a problem. No common mission management template e.g. ICS.

Thursday Afternoon Sessions: Terrestrial and Avalanche Commissions met together.

Presentation #5: Swiss KWRO “Matterhorn Rescue, Warnings Ignored”, In January, 2004, 3 Polish climbers attempted the Matterhorn despite warnings to the contrary due to severe weather predictions. Ultimately pinned by high winds and extremely low temperatures, the party contacted the Zermatt rescue station via cell phone and requested assistance. With high winds precluding a helicopter response, the climbers were instructed to descend and a ground team was dispatched to intercept them on the mountain. The ground team’s progress was severely hampered by the conditions and they were forced to turn back short of contact. During the night, the climbers called in and reported the loss of a majority of their survival equipment and rescue efforts were re-initiated. At great risk, ground teams, supported by helicopter, were able to perform the rescue and evacuate all 3 climbers in night storm conditions. In post incident interviews with the climbers, they stated that they perhaps should have paid heed to the warnings to not proceed, but such was the style of their extreme climbing techniques. The Swiss did not appreciate these comments, in light of the climbers call for assistance and the high risk nature of the resultant response. A complaint was filed with the Polish Mountaineering Association and a discussion ensued regarding the potential for requiring mandatory rescue cost recovery insurance for climbing parties practicing extreme alpine techniques.

Comment: The theme of this case history, climber accountability and responsibility, is repeated several times during Zakopane presentations and is considered a major concern when addressing the topic “Safety of the Rescuer”. Climber and outdoor enthusiast education, from a young age, is considered to be an integral part of the preventive search and rescue (PSAR) function.

Presentation #6: Slovenia “Mountain Rescuers’ Responsibility for Safety” The theme of this presentation was mission specific decision making and the importance of a leadership process which fostered total team input. It further emphasized the importance of affording all team members a “no go” veto opportunity and embraced the traditional philosophy that the safety of the individual rescuer, and thus the team, was paramount. Cited as example was an incident in February, 2004 wherein two uninjured climbers, threatened with imminent benighting due to weather, utilized their cell phone to call for assistance and evacuation. After developing basic subject profile information, it was determined the climbers had sufficient overnight equipment and the party was instructed to camp and assistance would be provided in the morning. This tactic avoided the high risk of dispatching ground or air resources at night in poor weather. Essentially, the climbers’ perceived emergency was not the rescuers’. The skies cleared in the morning and evacuation was facilitated without incident.

Comment: Again, the subject’s use of a cell phone was cited as a poor substitute for judgment and alternative options.

Presentation #7: Austria OBRD “When Warnings are Ignored – The Grobglockner” In June, 2004, after widely broadcasted forecasts of imminent storm conditions in the local

mountains, three separate climbing parties, totaling ten climbers, became lost and stranded above 3,500 meters on the Grobglockner. The initial call for help came from a Slovenian party of four, via cell phone, to the local police station at 5:30 a.m., 20 June. On 19 June, after a 15 hour summit climb in storm conditions, with two of the party injured by falling rock and ice, they had become lost in whiteout conditions and bivouacked below the summit unable to move any further. The police notified two local mountain rescue stations who ultimately discovered, through overdue party reports, that two additional rope teams were overdue on the mountain. Mountain conditions on 20 June were snow and whiteout with little improvement forecasted through 21 June. The decision was made to dispatch two ground search teams to the mountain, with air support not immediately available due to weather. The steep, glacier covered search area was large, with visibility very limited. The search team's ascent was hampered significantly by the



Search party ascending during storm

conditions and avalanche danger was a constant threat. A refuge hut was located at 3,480 meters. Once the search parties reached that location, without discovering any of the missing, it was determined that all of the missing parties were located above that elevation and the potential search area was adjusted accordingly. After establishing a presence at the hut, the search continued to higher elevations through steep terrain in the continued whiteout conditions. At this point, approximately 6 hours had passed since the initial call for help from the Slovenes. A Czech party of four was the first group contacted on the search above the hut. They had camped and were

waiting the storm's passing. Very quickly thereafter the remaining parties were found dug into the slopes and evacuation was begun to the hut for rewarming and psychological support. During this time, the ceilings lifted periodically and helicopter evacuation off the mountain began. Eleven hours after the initial call all personnel were off the mountain and the injured had been transported to medical facilities for further care. In all, 57 personnel were involved in the rescue operation including 42 rescue climbers, medical teams, and two helicopters. Mission managers considered this a high risk "borderline" operation throughout, due to the conditions, but balanced the risk against the peril of those in need and made the decision to proceed with ultimate "no go" authority vested in the lead teams.

„ [...] Some alpinist forget that ignoring the weather forecast before a trip cannot only get themselves in distress they are also putting at risk the lives of the rescue teams. Above that, rescue operations in bad weather always turn out to be a very costly venture. [...]“

„The bad weather front that had been forecasted was ignored by the climbers. It is very important that alpinists consider regional forecasts before going on a trip.“ (A member of the mountain rescue service)

Comment: In the aftermath of this incident, considerable media coverage was given to both the rescue operation and the decision making of the subject parties that led to need for rescue. Once again, the need for expanded climber education, as a PSAR function, was identified as an important component of the overall rescuer safety

program. In this case, the use of a cell phone was integral to a timely response and probably prevented further injury or death.

Presentation #8: Austria OBRD “Why It Is So Simple To Make Mistakes” This presentation focused on the various contributing factors and group dynamics involved in many accidents involving rescuers and rescue teams. Cited as example was a January,



2003 response to a single victim avalanche burial on the Lawenstein. The decision was made to enter the deposition search area without adequate consideration of renewed hazard and 53 rescuers were caught and buried. Miraculously, none were killed. The presenter, Walter Wurtl of the OBRD, advances the theory that an individual’s “situational awareness” is greatly influenced by both physical and mental filters. Further, this filtering of our perceptions is the cumulative result of direct and indirect personal experience, with our perceptions confirmed in order of past experience. Thus, the inexperienced situation surprises us the most...and renders us the least prepared. Due to the extremely low frequency of a critical juxtaposition of events in most mountain rescuers’ careers, the typical rescuer is left quite unprepared for such an event. Exacerbating this experiential problem are various team related

factors which can include:

- rescuer identification with victims,
- “expert’s” tunnel vision based on positive experiences,
- high risk = admiration syndrome (hero wish)
- individual fear of calling “no go”
- tendency to rush decisions in emergencies,
- internal team pressure to achieve the “goal”, which blinds the individuals to objective danger,
- avoidance of unpleasant decisions to preserve group harmony.

To avoid these pitfalls besetting sound decision making, Mr. Wurtl recommends the following routine safety practices:

- share decision responsibility by encouraging full team input for final decision maker,
- make all final decisions transparent to all involved,
- employ measured/paced responses to all incidents.



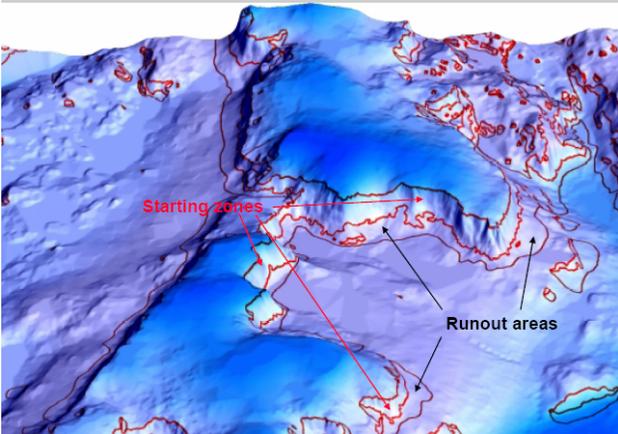
“What was he thinking”

Comment: A very insightful discussion of how teams and individuals, in retrospect, seemingly stroll into accidents blindly. An analysis of decision making and leadership should be a component of all team training, in addition to case history studies, to help ensure fewer “surprises” in critical incidents.

Presentation #9: Norway “General Danger in Assessment – Risk Management - Balancing Cost and Benefit. There is no avalanche forecasting in Norway due to the remote terrain far away from developed areas, but an increasing number of people are

making their way to the backcountry. “Safety in Mountain Rescue” really means “safe enough”, as there is no way to completely eliminate risk. In Mountain Rescue there is a certain asymmetry between rescuer and the victim, the victim has often placed himself in the situation with a disregard of the risk.

Potential avalanche terrain



Norway uses a computer generated topographical model of avalanche risk that was originally developed for use by the Norwegian Army. The entire country has been modeled, and maps are available for winter use that clearly delineates terrain in which an avalanche might be started (one color) and the shape and scope of the run out zone (another color). Of course this map must be supplemented by local information such as recent snowfall and weather conditions. There is a plan to enter this information into GPS mapping systems so the user has an additional piece of information to evaluate risk.

Risk analysis: In avalanche recovery we can develop some formulas for evaluating risk:

ICAR 2004 Zakopane

- **Example 1:**
- One person buried >1 h
Probability of being found alive 20%
- **Example 2:**
- Rescue crew of ten in the runout zone
Probability of being caught and killed 5%

Life expectancy 50 years

NGI

Risk/benefit analysis

- **Example 1, no search:**
Loss of life years: $50 \times 0.2 = \underline{10}$
- **Example 2, search:**
Loss of life years : $10 \times 50 \times 0.05 = \underline{25} (+10)$

ICAR 2004 Zakopane

NGI

So, though not attempting to put a value on life, we can develop some transparent decision tools to determine the wisdom of putting rescuers in harms way. In the above situation, we may very well be in a “no-go” situation when balancing risk against potential benefit. We also have to remember that risk is a subjective term that may seem quite different to a rescue leader than to an outsider. What may appear “risky” to one person may be well within acceptable limits with a proper evaluation of the facts and circumstances of a particular search.

Comment: Incident decision making rarely lends itself to purely formulaic solutions. However, this analysis provides valuable material for thought when considering the process.

Presentation #10: USA “SAFETY IN SEARCH AND RESCUE: DEALING WITH “GO-FEVER” By Rick Lorenz Part of the decision making process in search and rescue is the threshold decision to conduct the mission with a particular combination of resources. One of the dangers in this process is to use past experience or a pre-ordained outcome without fully analyzing the risk. This presentation looks at the concept of “go-fever” which can be

defined as an inevitable and relentless march towards conducting a mission before all the facts are fully analyzed. Examples are provided and a solution proposed to aid in sound decision-making. Finally, a technique is proposed for informing and leading small teams in the field based on a five paragraph operation order. This will help establish good communication and help ensure a safe mission. A three page summary of the presentation and a PowerPoint presentation is available upon request. For a more detailed discussion of leadership issues see the article by Rick Lorenz scheduled to be published in the Jan/Feb 2005 edition of Advanced Rescue Technology magazine.

Comment: After this presentation at Zakopane, Rick Lorenz was asked to submit an article on this subject for the international avalanche rescue magazine Neve e'Valanghe



Five Paragraph Field Leadership Model.

Friday Morning Programs

“Safety of Rescuers.” All participants were broken down into four language groups (German, French, English and Slavic.) Each group was asked to focus on three subjects and make recommendations to the entire group. The three subjects were: 1.) General safety of rescuers and risk analysis, 2.) “Extremists” in the mountains (those most likely to endanger themselves, and rescuers) and how to reach them with education, and 3.) The role that IKAR could play in the above two subjects. Rick Lorenz was elected spokesman for the English speaking group, which included the Americans, Canadians, Swedes, English, Scots, Norwegians, and Croatians.

Recommendations of the English Speaking Group:

- A. Safety of Rescuers (is the #1 goal) and how to accomplish:
 1. Educate Rescuers and develop risk assessment skills
 2. Promote safe practice through training, technique and equipment
 3. “Near miss” reporting: gather these reports from the teams in the field to identify trends and lead to lessons learned

- B. Education of the “extremists” and how to reach them:
 1. Part of safety education program
 2. Find role models who are in public eye (youth)
 3. Reach them through industry, school, clubs and organizations; include publications, media and internet.

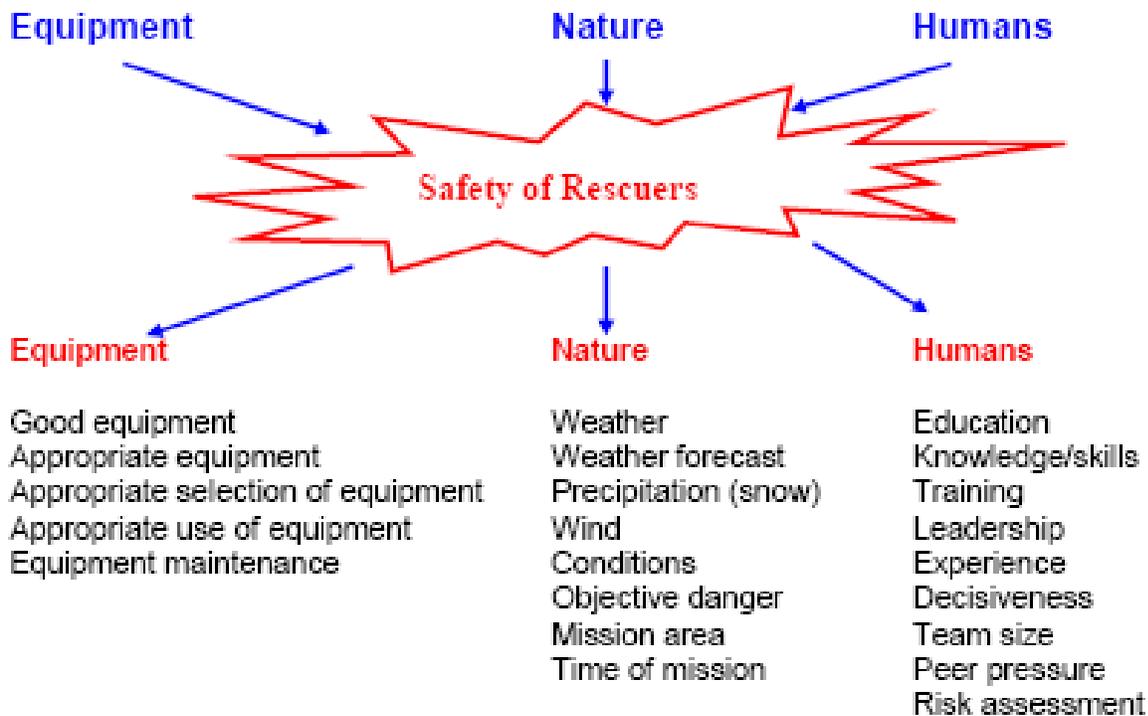
- C. Role of IKAR in achieving these goals:
 1. Create forum on IKAR website: internal only
 2. Encourage openness from teams (reporting of incidents and near misses)
 3. Focus on papers and reports from teams
 4. Create separate forum (open) on public safety education on IKAR site to report successes and lessons learned.

The page below is a schematic summary of all language group sessions.



INTERNATIONAL COMMISSION
FOR ALPINE RESCUE

EVALUATION OF THE TEAMWORK IN ZAKOPANE 2004



Analysis of the groups:

All groups want recommendations, guidelines, tools, and a common thread.

All groups are demanding preventative measures on the part of the mountain travelers as well as the rescuers.

All groups are asking for psychological training and incident debriefing.

Individual groups:

Danger scale for summer conditions (analogous to the avalanche danger scale and bulletin used in Chamonix).

Young rescuers take greater risk.

Presentation #11: France “The Risks in Avalanche Rescue” This presentation



recounted three incidents (2 avalanche, 1 mudslide) to illustrate the various risks encountered by rescuers when undertaking responses to slide operations. (See Risks in Mountain Rescue Operations, C. Shimanski, www.mra.org) In an effort to mitigate these risks, the French developed a mission management tool titled the “Triple Safety System” which is utilized to make go/no go deployment determinations. In summary, the primary factors considered in this process are:

- Time of Day (day/night)
- Subject Medical Status
- Mode of Access (ground, air, other)



The system, fully transparent, incorporates input from key personnel representing each involved rescue discipline (e.g. ground team, medical team, pilot). A matrix leads through various intermediate decision points and channels the mission managers to a predetermined action given a specific set of variables. In so doing, the system is intended to assist managers with organizational processes, diminish the influence of

subjective factors in decision making, and serve as a clearly articulated response to public inquiry.

Comment: The Triple Safety System can be a valuable tool for mission managers. It requires preloading of applicable response policies and protocols by the using jurisdiction. It may be difficult and, in fact, undesirable to eliminate all subjective reasoning from the decision making process. Experience, local knowledge, and subject history can be powerful assets.

An interesting note: the French mountain rescue services do not use helicopters for any night operations.

Presentation #12: Poland TOPR “Avalanches” The presenter described an avalanche mission which took place January, 2004 in Poland’s Tatra Range close to the Slovakia border. The avalanche resulted in four fatalities. Significant for this incident, in addition to the human tragedy, was the cooperation between Polish and Slovakian mountain rescue organizations. The Slovaks were conducting search dog training across the border at the time of the incident and monitored radio traffic covering the Polish response. They offered assistance to the Polish authorities, which was welcomed, and the Slovaks flew in 17 personnel with 7 dogs. Working together, the teams recovered the remaining three buried victims within one hour. This marks the first cross-border cooperative mission in the two countries’ history.

Additionally, an overview of the integrated TOPR and GOPR avalanche response system was presented. TOPR and GOPR are the two official Polish mountain rescue entities and they operate in their respective regions of the Carpathian Mountains along the Poland, Slovakia, and Czech Republic common border. In 2002, two staffed coordination centers

were opened to provide greatly enhanced response to avalanche and other mountain rescue incidents in southern Poland. This system, which is GSM mobile phone based, established an emergency line available to the public. Through this line, rescuers have access to on-call medical personnel (telemedicine), weather information, subject GPS positioning, as well as voice/data capability.

Comment: As stated earlier in this report, TOPR has been an operational mountain rescue organization for 95 years and it shows. They, as well as GOPR, are very well equipped and organized.

Presentation #13: France “Chamonix Mountain Safety Education (PISAR)”

PISAR focuses on accident prevention in high use area of the Mount Blanc Massif. There is a High Mountain Climbing Office in the town of Chamonix with daily updates on weather and climbing conditions, including avalanche forecasts. Focus is on youth and the need for care, the “ascending Mount Blanc site has 300 to 500 daily hits and it identifies the formidable nature of the undertaking. They hand out a small card on avalanche awareness as well as an “immediate response” card for those equipped with avalanche beacons.

They show and distribute a video on mountain safety that has very little narrative but focuses on the hazards such as rock fall, steep snow slopes and some fundamentals of travel with ice axe and rope. They try to do this in an interesting way without attempting to focus on all the possible mountaineering skills necessary to be safe in the mountains. The video is titled “Secours 2001”

Comment: The video could very well be useful in the US, either as a stand alone mountain safety video or an example to be used by a team or organization creating its own video. Rick Lorenz has requested a copy from France and will reformat it to US standard and make copies available to MRA teams after the first of the year 2005.

Friday Afternoon Field Sessions: Although we were asked to bring “personal equipment” to Poland, we never had an occasion to use it. We were transported 30 minutes by bus to a canyon area to view a rescue demonstration and there was no “hands on” activity. The high-angle litter demonstration was no doubt worthwhile, but it was so far away from the spectators that it was not very useful.

Presentation #14 (Fri Evening): Swiss Alpine Rescue Pankraz Houser

The presenter has an aluminum frame about 6 by 8 ft that is designed to demonstrate basic rigging systems and various pulley systems in dealing with a 100 Kilo load. He pointed out the potential loss of rope strength and that a “knot can reduce rope strength by 50%” and a number of other principles. The use of the aluminum frame can be a convenient way of bringing basic rigging principles into a classroom situation.

Comment: In the western US, the Rigging for Rescue (RFR)



standards have resulted in substantial improvement in technique, equipment and standardization for US teams. See their website at <http://www.riggingforrescue.com/> At IKAR in Zakopane this year was Kirk Mauthner from Canada, an ex-owner of RFR, and he thought the Swiss presentation was rather basic, with substantial room for improvement. Rick Lorenz encouraged Kirk to make his own presentation at the next IKAR conference, and offered to assist in getting it on next year's schedule. The RFR standards should be well received by the international audience, and Kirk has some ideas for a good presentation.

Saturday Morning Sessions

Technical Presentation on ARVA 457 ADvanced Rescue Beacon.

The technical representative from ARVA described the capabilities of the new beacon, it includes both digital and analog capability, an LCD screen and 5 LED's to indicate signal strength and direction. It has dual antennae with a 60 meter range, giving an estimated search band of 40 meters. Having a capability of adding upgradeable software should extend the useful life of the unit. The ARVA rep claimed that the unit can handle a situation of five multiple burials and focus on the strongest signal. ARVA also demonstrated a new "avalanche ball" just bigger than a basketball that is designed to literally leap out of a backpack and is connected to a 20 foot cord. This presumably will allow searchers to quickly find a buried victim as the ball floats to the surface during the avalanche. Comment: No statistics were provided on any successful use of the ball in an avalanche.

Here is a note recently posted on the Internet: Life-Link Backcountry Travel will be the North American distributor for ARVA avalanche transceivers. "We are very pleased to be representing ARVA both in the United States and Canada. We are very excited about ARVA's newest transceiver the ARVA ADvanced, which is a twin antenna transceiver that has both a digital and an analog mode and will have longer range and longer battery life than any of the transceivers currently on the market," said John Scott Executive Vice-President for Life-Link Backcountry Travel. The new ARVA ADvanced will be available in late November and will retail for \$299.95.

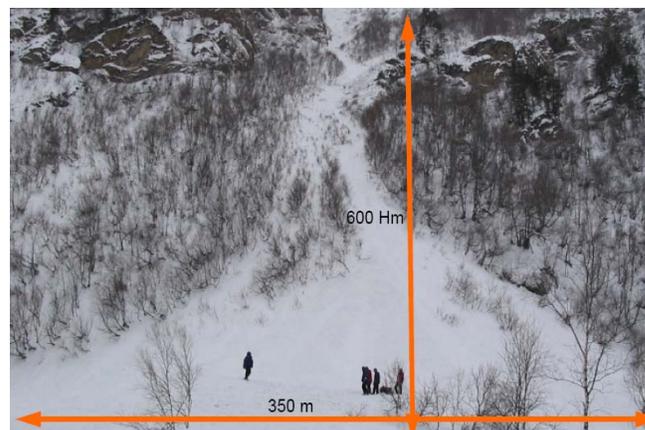
Presentation #15: Germany Bergwacht "Incident in Terskol, the Caucasus, Russia, February 2004"



On February 10, seven snowboarders, the dependents of Russian soldiers in a remote mountain region of southern Russia, were reported missing and believed buried by an avalanche. One was believed to be carrying a RECCO passive reflector tab in his clothing. This resulted in a high level request from the Russian ambassador in Germany for the loan of the detection equipment from the RECCO corporate headquarters. Following RECCO policy, the request was initially denied, the equipment is not loaned or sold, only provided to ski patrols and those trained in its use. Finally, an agreement was reached with RECCO and the Russian government to allow two German rescuers (Bergwacht) trained in the equipment to travel to the scene with detection equipment and conduct the search.

It took ten days to get searchers to the Terskol with their gear and the necessary RECCO equipment. Only two members of the Bergwacht participated in the trip and they encountered substantial problems from the outset. The logistic problems in getting people and equipment to the scene were very difficult, despite the high level political involvement of the Russian government. Flights had to be routed through Moscow where diplomatic and customs clearance was required. There were hours of delay based on an attempt by the Russian border service to charge a duty (tax) on the incoming rescue and detection equipment. Upon reaching the scene, it became clear that the relatives of the missing boys had high expectations that they would be found alive, the local authorities did nothing to dispel this notion despite the fact that the boys had been missing more than 10 days.

Logistic problems included a lack of local power for the rescuers to re-charge batteries. There was another major problem in dealing with the local authorities who were suspicious of the two German rescuers. The mission seemed to be imposed from above, and this did nothing to help the level of cooperation in the field. Conditions in the field were very primitive and the local searchers were well intentioned but completely untrained in search techniques. The 2 Bergwacht members brought 20 detector units, but had a very difficult time training the locals to use them.



Main search area

Families mixed with searchers and there was no one to manage the incident command center and deal with the families. Finally there was the language problem, no one had thought to assign interpreters to the mission and only a few of the locals had any knowledge of English, which was the closest thing to a common language for the mission. The Bergwacht members spoke English, but no one in the area spoke German.

After 10 minutes of searching with the RECCO detector, an avalanche victim carrying a RECCO reflector inside his pants was found. Fifteen minutes later the second victim was found with the help of the detector which received a signal from the person's cell phone. The burial depth in the very compact snow, now partly transformed into ice, was approximately three meters. Another two avalanche victims were found two days later with the RECCO detector, and both were buried on 2-3 m. The first carried a walkie-talkie ; the second was found close to his cell phone which responded to the RECCO detector. RECCO's ability to detect other reflective devices is an important capability of the system.



In terms of lessons learned, the presenter said that much more should have been done in advance to investigate the scene, interview witnesses and find the probable location of the victims. Without an investigation unit and an organization devoted to communication with the families, the scene was in a grate state of confusion and tension.

Comment: Despite the obstacles the Bergwacht members were successful, although it was ten days after the incident before they were able to get to the scene and begin to operate. There are some lessons here for individuals or units in the USA that attempt to respond to incidents across national borders. Requests like this may become more frequent as world communication improves and people in developing countries seek outside assistance. As technology like the RECCO system proliferates, there might be increased need to import people and equipment to use it on short notice. At present, the MRA has no capability to respond to international incidents, but individual members are sometimes asked to make recommendations on how to respond. We should be aware of the complexities and challenges before volunteering assistance.

Presentation #16: France “High Mountain Safety and Organization of Mountain Rescue in France”

The birth of the current mountain rescue system in France can be traced to an incident on Mount Blanc in 1956. A mountain helicopter crash resulted in the slow deaths of three people, extensive publicity; all of France was shaken by the incident. Another climbing accident a year later without a competent rescue response resulted in a decision by the state to take over the responsibility for mountain search and rescue for all of France. In 1958, the mountain rescue police were established on the theory that mountain rescue is a public service, and it has operated on that basis ever since.



Today, there are 250 full time mountain police in France, with the headquarters and training center in Chamonix. The career pattern for mountain police included basic training and regular certification in all the climbing, winter travel and rescue skills. There are exacting standards both in technique and physical conditioning, with an all weather capability. They follow the basic military principles in organization and mission accomplishment, and sometimes conduct training with the French military school for the high mountains in Chamonix. Overall, this brings a high degree of professionalism to mountain rescue in France. More detail on Mountain Rescue in France can be found on the MRA site (International-IKAR) with the Chamonix 2000 report filed by Rick Lorenz)

Comment: In the U.S., the MRA can trace its roots back to the same year, 1958, but it was established on the theory that mountain rescue is essentially a volunteer function. Although not “paid professionals”, U.S. mountain rescuers take pride in professional standards in their efforts on behalf of the U.S. public. In 2008 both France and the U.S. will celebrate 50 years of mountain rescue service, and we should plan some exchange with France as part of the commemoration.

Presentation #17: Croatia “Croatian Rescue Video”

Matko Skalamera from Croatia was at our MRA conference in Alaska last summer and he showed and provided multiple copies of a short promotional video showing the work of his team. If you want a copy, e-mail Rick Lorenz and he will burn one on a CD and mail it to you.

Presentation #18: Norway “Avalanche Incident” Winter, 2004

Presenter Dan Halvorsen detailed a successful avalanche recovery of a 12 year old boy buried under 2 meters of snow for two hours. First dogs were on scene in 30 minutes, and 8 dogs within 40 minutes. Boy was semi conscious at time he was removed from snow but stopped breathing promptly thereafter. He was quickly resuscitated and he has since made a full recovery.

Lessons learned: Prompt action to get dogs on the scene was a major factor in locating subject. Don't give up even though subject is missing two hours or more.

See accompanying PowerPoint Presentation (in English) for maps, photos and diagrams. (on IKAR web site, can be downloaded) Nice photo of subject sitting in rescue helicopter.

Presentation #19: MEDCOM 2004 Survey “Current Status of Mountain Emergency Medicine” The U.S. delegates to the IKAR Medical Committee were unavailable for the Zakopane meeting. The following are excerpts from a presentation by that committee detailing the results of a survey of IKAR member countries in 2004. The full Powerpoint presentation can be obtained by contacting Rick Lorenz or Dan Hourihan.

14 ICAR countries

- Austria (A)
- Canada (CA)
- Croatia (CR)
- Czech Repub
- England and Germany (D)
- Italy (I)
- Poland (PL)
- Scotland (SC)
- Slovakia (SK)
- Slovenia (SL)
- Spain (E)
- Switzerland (CH)
- USA

Current status of mountain emergency medicine

Inquiry 2004



ICAR MEDCOM
11. Europe: The Eurohelix Club, Garmisch-Partenkirchen, Markus Pfl
12. Slovenia: Jaskolcica 2004

Ground mountain rescue Rescuers

	Europe	NA	Total
Total rescuers	32150	5385	37535
	100%	100%	100%
Governmental	522	440	962
	2.2%	8.2%	2.6%
Non-governmental	31628	4945	36573
	98.8%	91.8%	97.4%
Paid	3800	1050	4850
	11.8%	19.5%	12.9%
Not paid	28350	4335	32685
	88.2%	80.5%	87.1%

Helicopter rescue Staff

	Continental Europe	E+W, NA, SCO	Total
Total helicopters	155	592	747
	100%	100%	100%
Staffed with Physician	108*	183*	291
	69.7%	30.9%	38.9%
Staffed with Paramedic	14**	357**	371
	9.0%	60.3%	49.7%
Without medical personnel	33	52	85
	21.3%	8.8%	11.4%

32.700 rescuers are volunteering for mountain rescue operations without being paid for their activities



Saturday Afternoon

Promotion of June, 2005 MRA meeting in Vail, Colorado.

Dan Hourihan and Rick Lorenz handed out one hundred personalized invitations to rescuers from around the world to attend next summer's meeting in Vail. There was an emphasis on getting as many as possible practical demonstrations from international teams.

General Assembly of Delegates

Delegates, or proxies, representing 32 of the 33 IKAR member organizations were in attendance for the General Assembly. Additionally in attendance as an honored guest was the Austrian ambassador to Poland. President Grab reported on the activities of the Board during the previous year including: ongoing negotiations with the EU regarding possible funding for IKAR functions, the attendance of Grab and Gebhard Barbisch at the June, 2004 MRA conference in Alaska, and the commitment of 20,000 Swiss francs to contract with the Swiss Alpine Club to assume IKAR secretarial duties. The four commission presidents reported on the meeting activities and progress of their respective commissions. The results of the Project Futura 2010 survey questionnaire will be posted to the IKAR website.

Toni Grab and the entire current IKAR Board were reelected to additional four year term (2005-08). The IKAR attorney was contracted for 1 additional year.

The 2005 IKAR Congress will be held in Cortina d'Ampezzo, Italy 12-15 October. The theme of the 2005 Congress was officially announced as the "Search for Missing Persons".

President Grab officially closed the Zakopane meeting by thanking and congratulating TOPR on an extremely well-organized and managed conference. He then challenged all delegates to continue working together closely and productively to ensure IKAR remains something that makes sense to belong to...on behalf of those in need in the mountains.

Respectfully Submitted,
Rick Lorenz and Dan Hourihan, MRA , January 2005

