

MountainSafe

Increasing safety and awareness in the mountains in ski alpinism and related activities

Erasmus+ Sports Project

2019-2020

sialpin.hu/mountainsafe



Mountain Safe



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Description

Outdoor sport done in a mountainous environment are becoming more and more popular in the recent years all over Europe. These include a large pool of sports from general hiking, trail running, mountain biking to very specialized sports like climbing or ski alpinism. However -especially in non-Alpine and small countries- the necessary background knowledge in health and safety, especially associated with the mountainous environment is often missing. Thus the main focus of the current project is to raise health and safety awareness for outdoor sports done in a mountainous environment, close the gap between amateur, hobby athletes and mountain professionals, put an emphasis on accident prevention and continue the work on developing a network of European organizations focusing on these sports. The current project will focus on ski alpinism (backcountry skiing, where both uphill and downhill travel is made on skis without the use of any motorized equipment e.g. without the use of lifts, and which usually also includes a number of techniques from classical alpinism, e.g. glacier traverse, also called ski touring and ski mountaineering or skimo). However the concepts formulated within this project have a much wider audience, including any people visiting the mountains for outdoor activities (i.e. freeriders, hikers, snowshoers, trail runners, mountain bikers, climbers), as the general basic safety

guidelines are very similar for all these disciplines (called ‘associated sports, associated activities, related activities’ within the project).

The main **objectives** of the current project are:

1. to share good practices and work out new methods on:

- how to increase awareness on mountain safety: on one side with a special emphasis on ski alpinism and ski associated hazards, e.g. avalanche awareness, winter mountain weather, winter mountain first aid and rescue skills, team psychology, safety for freeriders, etc. On the other side on general mountain hazards concerning general outdoor users, e.g. weather, first aid and rescue skills, orientation. Associated with these is the question if and how could this kind of safety awareness be extended to further interested parties, e.g. to people leaving the groomed slopes only occasionally, or to trekkers and hikers;
- how to make people more willing to visit necessary courses, training sessions, to practice and to promote lifelong learning both in ski alpinism and in associated sports (e.g. for freeriders);
- how to reach younger people with these issues. Reaching them is both a very important and a very difficult task, due to the different pedagogical concepts that have to be applied;
- how to increase the willingness to volunteer in associated activities, e.g. self-organized practice sessions, mentoring, etc.;
- how to improve and maintain cooperation with stakeholders, e.g. rescue bodies, course instructors, experienced people willing to act as mentors, etc.;
- how to teach health and safety issues in an efficient way, e.g by using gamification, the optimal course structure and length, pedagogical and psychological aspects.

2. to provide cross-border joint training opportunity for the Project Partners:

- for efficient and novel knowledge exchange between the Project Partners;
- for working out new methods in training;
- to train the participants in efficient accident prevention and management;
- and for this knowledge to be passed onto the outdoor community in the long term.

3. and to enhance networking between the Project Partners, associated bodies and other relevant associations to further build a network of associations across Europe with the main focus on ski alpinism and its associated sports (i.e. trail running) in order to establish a tradition of working together and sharing good practices in the future. The network will be an extension of the already existing network founded within the Erasmus+ Sports 'Up and Down' project coordinated by the HSMA.

Meetings

1. Kick-off Meeting, 23-26. May, 2019, Budapest and Bajot, Hungary
2. Training Meeting on Improving safety in the mountains in non-winter month, 05-12. October 2019, Basko Polje, Croatia
3. Training Meeting on Improving safety in the mountains in winter, 21. February - 1. March 2020, Romania
4. Follow-up Meeting, 5. September 2020, online

Kickoff meeting

24-26. May, 2019.
Budapest and Bajot, Hungary

The meeting was held for the Project Team and the main organisers of the Training Meetings in order to meet in person, to discuss all main project management issues associated with the project.

Agenda

24. May 2019.

by ca. 17:00: participants arrived in Budapest in the evening hours. Check in at accomodation
19:00- Welcome dinner

25. May 2019.

7:00 Travelling to Bajot to the meeting venue

8:30-12:30 Morning session

-discussing and finalising the details of Training Meeting 1

-discussing and finalising the details of Training Meeting 2

12:30-13:30 Lunch brake

13:30-18:00 Afternoon session

-discussing a dissemination plan for the project

- discussing the webpage of the project
- planning the final report of the project

17:30- Preparing dinner together

26. May 2019.

7:00 Breakfast

8:00-11:00 Morning session

- planning the financial part of the project

11:00- Travel home



Training Meeting on Improving safety in the mountains in non-winter month

5-12. October 2019.
Basko Polje, Velebit mountains, Croatia

The aim of the meeting was to share experiences, knowledge and practices through a number of specialized topics on how to increase general mountain safety for ski alpinism and related activities, discuss methods to increase awareness and improve training specifically for people involved in outdoor mountain sports. The main format of the meeting were lectures and joint training held by certified instructors and invited professionals (e.g. rescue personnel) and a number of workshops, where the participants had the opportunity to discuss and share their own methods and experiences. The meeting was led by one of the participants of the Host organisation, a certified instructor in safety and rescue, ensuring the truly high quality and systematic approach of the Meeting.

5km from the meeting venue the Croatian climbing clubs held their annual event as a remembrance to their lost friends (called Glavno da se Klajba). The meeting participants had the option to join some of the activities of the Klajba event in order to make even more publicity for the project.

Agenda

05. October 2019.

arrival of participants, check in

20:00- dinner together with the Klajba participants

06. October 2019.

7:00-8:00 breakfast

9:00-12:30 workshop: orienteering and mountain weather

12:30-13:30 lunch

13:30-17:00 training: general ropework

18:00 dinner

20:00 lecture of Silvo Karo at the Klajba event

07. October 2019.

7:00-8:00 breakfast

9:00-12:30 lecture: first aid in mountaineering led by the Croatian Mountain Rescue Service

12:30-13:30 lunch

13:30-17:00 training: first aid in mountaineering led by the Croatian Mountain Rescue Service

17:00 dinner and free time to do sports together

21:00 get together games

08. October 2019.

7:00-8:00 breakfast

9:00-12:30 workshop: general mountain hazards

12:30-20:00 free time to do sports together for the participants

20:00 dinner

09. October 2019.

7:00-8:00 breakfast

9:00-12:30 lecture: self and compagnon rescue techniques

12:30-13:30 lunch

13:30-17:00 training: self and compagnon rescue techniques

18:00 grilled dinner and chill out evening

10. October 2019.

7:00-8:00 breakfast

9:00-12:30 workshop: tour planning for groups and individuals

12:30-13:30 lunch

13:30-17:00 workshop: group psychology

18:00 dinner

11. October 2019.

7:00-8:00 breakfast

9:00-12:30 workshop: organizing competitions in the mountains and their safety aspects

12:30-13:30 lunch

13:30-17:00 workshop: how to increase awareness and educate people not closely related to mountaineering

17:00-18:30 meeting for the Project Team and Meeting organisers

18:30 dinner

20:00 farewell party

12. October 2019.

7:00 breakfast

free time and departure

Preparing and taking most meals was always done together by the participants as a group building activity.

One participants review of the training sessions

(by Adam Farkas, mountaineering club leader, rope technician, ski alpinist and climber):

“I have attended on the project as part of the Hungarian team. My personal aim was to see how other bodies are carrying out rescue trainings and see what I can build into my own regimes.

The first aid training was split between a wider, theoretical cover and a more in-practice session, focusing on climbing related accidents.

Starting from the basics, the lecturer has covered the legal background, where to go for help and showed how much is being carried by a professional.

Personal questions were answered as well, explaining what to do and what not. This I found quite interesting, as many cases are much more complicated as they seemed. Moving a person with a possible fractured vertebrae is well known as NOT to do, however other injuries could overwrite that. The aim is to maximize the chance for survival, quality of life within reasons.

The practical demonstration showed how to deal with more common injuries on the head, and limbs. The main takeaway for me was to be able to use climbing gear and minimal First aid kit to create efficient solutions for common injuries.

Single rope techniques (SRT) are rarely discussed in an industrial environment, where it is safe and an operator has access to multiple devices. In the world of rock climbing, this is rarely realistic. Weight matters in every level, and the scenarios are slightly different.

It was great to see how can I utilise my rope access knowledge for rescue in this environment. The lecture started with a theoretical overview of the cases that could happen and a brief reminder to fall factors and anchoring.

After this the demonstration progressed to trees. The whole rescue process has been done “on the ground”. This helped to practice it in a safe place, where mistakes are not costly.

Last part was the actual training. Groups of 2-3 people were formed and we practiced an emergency situation in live. This was done under the supervision of the trainer and other staff.

The event closed with a nice barbecue under the rocks. I can not even wish for a better place between the sea and the mountains for this! Both sessions were teaching us to use what we have. An average climber's equipment is sufficient to save lives, but should not be taken as an invitation to take more than acceptable risks during outdoor activities.”



Training Meeting on Improving safety in the mountains in winter

21. February-2. March 2020.
Balea Lac, Fogaras mountains, Romania

Aim of the meeting was to share experiences, knowledge and practices on how to increase winter mountain safety for ski alpinism and related activities and how to increase awareness and improve winter mountaineering training. The speciality of the meeting was that it was led by two members of HSMA who are also internationally certified avalanche education instructors of the American Avalanche Association, making it possible that upon successful completion of the Meeting the participants could earn the Avalanche Science REC Level 1+ certificate of the American Avalanche Association. This is the first stage of one of the most high level avalanche educations around the world. All participants have successfully earned the certificate. The main format of the meeting were lectures and joint trainings led by the instructors. However the meeting also included a number of workshops where the participants themselves shared their own experiences on set topics.

Due to the number of participants and the nature of the REC1+ training (allowing only a maximum of 6:1 participant to instructor ratio) the Meeting was conducted in two parts. In the first part one half of the participants took the training, while the second part of the participants attended the workshops. Then at the middle of the Meeting the groups exchanged tasks.

Agenda

21. February 2020.

arrival of participants

19:30 dinner and get to know games, safety meeting for the Project Team

22. February 2020.

7:00-8:00 breakfast

8:00-12:30 lecture day for group 1: Situational Awareness Framework, Avalanche Triangle - Weather, Terrain, Snowpack, Introduction to Conceptual Model and ATES Terrain scale, Avalanche Problems and Classification, Snow Metamorphism

8:00-12:30 workshop on increasing avalanche awareness for the skimo community for group 2

12:30-13:30 lunch

13:30-18:00 lecture day for group 1: Avalanche Release and Basic Fracture Mechanics, Safe travel; Protocols, Rituals, Human Factors, Trip planning - Intro to Bitácora field book, Backcountry and rescue equipment, Companion Rescue Primer

13:30-18:00 workshop on increasing avalanche awareness for the general public for group 2

18:00- dinner and discussions by the fire, safety meeting for the Project Team

23. February 2020.

7:00-8:00 breakfast

8:00-17:00 field day for group 1: Demonstrate trip planning and filling Bitácora field book, Demonstrate beacon trailhead check, Wx/Ax/SP Obs recording demonstration, Snowpit demonstration, A basic stability test demonstration, Rescue demonstration, Rescue Simulation exercise, Identify avalanche terrain, measure slope angles, Uphill/downhill safe travel, Demonstrate Day summary

8:00-12:30 workshop on winter rescue rigging for group 2

12:30-13:30 lunch for group 2

13:30-18:00 free time for group 2

18:00- dinner and discussions by the fire, safety meeting for the Project Team

24. February 2020.

7:00-8:00 breakfast

8:00-17:00 field day for group 1: Student-led beacon trailhead check, Student-led field trip planning, Surprise rescue simulation, Identify avalanche terrain, measure slope angles, Student snow pits and stability tests, Uphill/downhill safe travel, Day summary

8:00-12:30 workshop on group psychology for group 2

12:30-13:30 lunch for group 2

13:30-18:00 workshop on winter mountain rescue for group 2

18:00- dinner and discussions by the fire, safety meeting for the Project Team

25. February 2020.

7:00-8:00 breakfast

8:00-17:00 field day for group 1: Student-led beacon trailhead check, Student-led field trip planning, Surprise rescue simulation, Identify avalanche terrain, measure slope angles, Student snow pits and stability tests, Uphill/downhill safe travel, Day summary

8:00-12:30 workshop on how to improve the winter mountaineering education system in the region for group 2

12:30-13:30 lunch for group 2

13:30-18:00 free time for group 2

18:00- dinner, safety meeting for the Project Team

19:00- midwayparty

26. February 2020.

free time and joint trip for both groups

27. February 2020 -1. March 2020.

the same as between 22-25. February, but exchanging the roles of the two groups. Farewell party and a final meeting for the Project Team on the last day.

2. March 2020.

departure day

One participants review of the trainings

(by Gergo Santha, leader of the Hungarian Mountaineering Education committee, ski alpinist and climber)

“What I have learned from the course

I attended the Avalanche Science REC Level 1+ and Avalanche trainings this February. The two courses were held together. First of all, I now have a better understanding of snowpack layers. I learned the fundamentals of snow formation and growth in the atmosphere. After these fundamentals, I learned about snow metamorphism, bond formation and several forms of snow crystals, from newly fallen snow to faceted snow crystals. The next step was understanding the key parameters in avalanche activity: critical slope angles, precipitation and wind and also how these parameters would be effecting the energy balance of the snowpack. With the knowledge of snowpack layering and key parameters I learned how to classify different types of avalanches and their destructivity. I have been also introduced to avalanche hazard awareness and assessment methods. I learned to use the 'Bitacora', the field book, which proved to be an invaluable tool to put the hazard assessment into a structured perspective. One the most essential tools of hazard assessment are the snow pits and based on the observed results which type of snow pit test should be used. My instructors had taught me how to carry out a snow pit test the correct way. I learned to evaluate layer hardness, measure temperatures along the cross section and calculate temperature gradients as primary driving forces of snow metamorphism. Secondly, I've been practicing the proper avalanche rescue techniques. I

learned the correct way of probing and the usage of the avalanche beacon in single/multiple buried victim situations with or without using the multiple burial function (flagging) of our devices. I have practiced searching single and multiple victims in white-out conditions.

After taking the course, I can't say I'm professional about it but at least I know some fundamental knowledge."



Follow up meeting

05. September 2020.
Online meeting via Zoom

Follow up meeting where the aim was to discuss all main project management topics associated with the closing of the project, to overview and supervise the dissemination of the project and to analyse the short term outcomes of the project based on the Project Teams feedback collected in their own countries. Next to these an important topic was to asses to the future collaboration options and subsequent continuation of the project work.

Agenda

9:00-12:00

- summary of the project
- overview of results
- overview of finances

12:00-13:00 lunch break

13:00-17:00

- dissemination
- final report
- main conclusions of the project
- future collaboration options

Project conclusions

1. Safety, awareness, and appropriate knowledge and experience for winter mountaineering and in specialized mountaineering topics (like self rescue) is often missing in the region. Not just for the hobby athletes, but also in a lot of the cases even for the professionals as well. This usually comes from the fact that often even the instructors have no idea what type of knowledge they themselves are missing, thus they are not actively seeking further self education and experience gaining opportunities in these topics. Another problem is the consistent lack of systematic, module based and highly specialized training and education opportunities in the region, once again hindering self education for the community. 'What one doesn't know exists, they won't miss'.
2. The project was a more than appropriate type of answer for these problems. By bringing high level international education into the region, and allowing a number of motivated people, -who are already working in knowledge sharing, - the project highly promoted awareness to the lack of knowledge, future self education and even showed good options to do so. This is definitely the way to go further in the future with the following steps:
 - a. bring high level education opportunities into the region
 - b. support a certain number of community members to take part in these, choosing people who will certainly pass on the knowledge and the experience and motivate others to seek such opportunities
 - c. build an educational system in the region based on such modular, highly systematic knowledge with the help of these people
3. The format of the Training Meetings was working really well. Lectures and trainings led by certified professionals, while more freestyle workshops for knowledge and experience sharing among the participants proved to be a really great mix of both worlds.
4. The Project Partners have strongly agreed to continue working together towards these goals in the future.