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Guidelines for Self-Guided Hikes for School-Aged Youth



<https://baltictrails.eu/lv>

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Project partners:



Latvian Rural Tourism Association “Lauku ceļotājs”



Kurzeme Planning Region



Vidzeme Planning Region



Movement Spontaneous, Latvia



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MTÜ Maaturism, Estonian Rural Tourism Association



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Table of Content

Guidelines for Self-Guided Hikes for School-Aged Youth 3

1. Objective	3
2. Basic Elements of Planning Self-Guided Hikes	3
2.1 Route Analysis and Map Reading	3
2.2 Event management plan	4
2.3 Weather forecasting and equipment selection	7
2.4 Meal and Activity Planning.....	8
3. Piloting	10
3.1 Hike with Laurenču School Students	10
3.2 Piloting Feedback and Improvements	11
4. Recommendations	12
5. Partners Involved.....	12
6. Training Video	13
7. Useful Resources	13
Using Digital Tools in a Hiking	14
1. Objective	14
2. Packing and Equipment with Digital Support	14
3. Weather Conditions	15
4. Web Cameras for Real-Time Trail Conditions	15
5. Navigational Tools with GPS	16
6. Platforms for Trail Updates	16
7. Communication and Safety	17
8. Post-Hike Feedback and Data Tracking.....	17
9. Final Online Tool Checklist	17

Guidelines for Self-Guided Hikes for School-Aged Youth

Specific target group: school-aged youth.

Non-specific target group (who may adopt the experience): any potential hiker, guides who organise hikes, businesses providing services near the routes, and schools planning hiking trips.

Solution implementer: Movement Spontaneous.

1. Objective

Self-guided hikes are a great way to learn, experience, and explore the world around you. These activities not only provide young people with the opportunity to be active and spend time in nature, but also allow them to learn practical skills. Hiking encourages responsibility, teamwork, and involvement in decision-making, while also developing skills necessary for daily life and crisis situations. These guidelines were tested with ~12 years old participants from Sigulda Laurenči school (Figure 1) on a pilot hike.



Figure 1. Starting point of the hike in Sigulda with students of the Laurenči School

2. Basic Elements of Planning Self-Guided Hikes

To ensure a successful and safe hike, it's important to learn the basic skills of route selection and map reading, how to lead a hiking group, how to predict the weather, and how to choose appropriate equipment. Additionally, it's crucial to plan meals and activities effectively.

2.1 Route Analysis and Map Reading

Criteria for Route Selection

Choosing the right route for a hike with school-aged kids is crucial because their physical abilities and endurance vary depending on age. For younger kids, around **7–11 years old**, it's best to go for easier and shorter routes, like **5–8 km**. A good example would be the [Sigulda - Turaida](#) route (6.5 km) in Gauja National Park, where the trail goes through forest roads without steep climbs, and is well-marked. Another option is the [Cenas Moorland trail](#) (about 5 km), where you walk on boardwalks over a bog, giving kids a chance to explore the bog ecosystem.

For teenagers aged 12–16, you can plan longer and slightly tougher routes. The Seaside Trail from [Saulkrasti - Lauči](#) (~13 km) or the [Green dune](#) in Ķemeri National Park (~22 km) offer varied terrain with sandy beaches and dunes. These routes are great for teens with average fitness and provide a fun challenge while still being safe.

If the **focus is on nature exploration**, the [Dunduri Meadows](#) with its observation tower is a cool option. Here, teens can spot wild horses and different birds, helping them practice animal-watching and identification skills.

Map reading and navigating in nature

Learning to read maps is an essential skill that students can practice using both printed (Figure 2-3) and digital maps, like the Forest Trail and Baltic Coastal Trail routes available on [Baltictrails.eu](#). Young people can be taught how to recognize bodies of water, terrain features, and figure out their location using landmarks in nature. In addition, using **GPS** (Global Positioning System) helps them pinpoint their location accurately and understand how coordinates work, which complements

traditional maps and aids in planning routes.



Figure 2 Printed route description with map



Figure 3 Printed route description with map

In today's digital world, it's important to teach how to effectively use different apps for planning and guiding hikes. Apps like **Strava** and **Outdoor Active** allow you to input and use **GPX files**, which contain detailed route info like coordinates, elevation, and directions. These files help you follow a route precisely, both before and during the hike.

There are also user-friendly apps like **Komoot** and **Locus Map**, which let you track your progress and location in real time. Young people can combine digital tools with printed maps during hikes to practice navigation skills and learn to rely on different tools for finding their way.

Preparing GPX files and using apps

Planning hikes has become much easier with the help of **GPX files**, which are designed to share geographic coordinate data. These files allow users to save and share routes, paths, and specific points, making it easy to plan outdoor activities accurately. To prepare GPX files for a hike, you can select a route from sites like Baltictrails.eu, where various GPX files are available for different hiking segments.

Once downloaded, these files can be imported into navigation apps like **Strava**, **Outdoor Active**, **Explore app**, or even **Google Maps**. This lets you track the route in real time on your smartphone or smartwatch, such as Garmin or Suunto devices. GPX files provide precise route mapping, which is especially helpful if trail markings are missing or if there's confusion about the direction.

2.2 Event management plan

A well-structured plan ensures that all participants are aware of their responsibilities, familiar with route details, and prepared to respond quickly in any emergency situation.

Planning tools and communication

Digital tools make it easy to share important information with all participants, though traditional planning—like using a classroom board or notebooks—works too. Involving everyone in planning (Figure 4-6) gives young people the chance to contribute to the route and task organization, encouraging discussion and teamwork. Some digital tools that can assist in organizing a hike include:

- **Trello:** A virtual board where you can create a packing list, schedule the hike, and assign tasks. Each task can have an assigned person, a deadline, and a status.
- **Google Docs/Sheets:** These allow for a shared hiking plan where each participant can access key info, such as roles, route plans, and safety guidelines, in one document.

- Technology evolves fast, so the tools available frequently change. It's important to choose tools accessible to everyone, keeping in mind age restrictions. For example, apps like WhatsApp and Trello are generally available only for users aged 13 and up, which might limit their use among younger students.



Figure 4. Remote meeting with students



Figure 5. Remote meeting with students

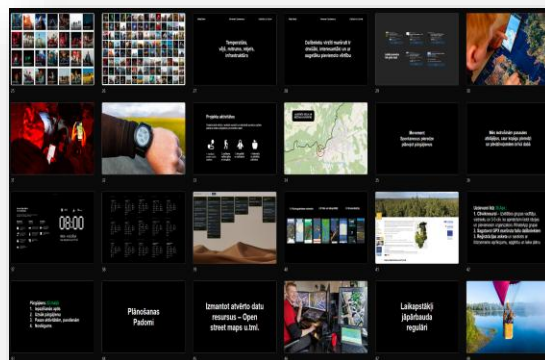


Figure 6. Online meeting footage and presentation to students

Hike plan, schedule, and roles

When preparing a hike plan, it's helpful to create a clear schedule that covers all key stages—starting time, rest breaks, and the expected return. For example, for a 10 km hike, the plan might look like this:

- **09:00 – Meeting and briefing (Figure 7):** Everyone gathers at the starting point, where information is given about the route, safety rules, and each participant's responsibilities.
- **09:15 – Start of the hike:** The group sets off, following the planned route.
- **10:30 – First rest break (15 min):** After 3–4 km, the group takes a short break to drink water, have a snack, and make sure everyone is feeling good.
- **12:00 – Lunch break (30 min):** After about 7 km, the group stops for a longer break to rest and eat lunch.
- **14:00 – End of the hike:** The group finishes the hike, arriving back at the starting point or the designated endpoint.

Assigning roles during the hike helps ensure smooth teamwork and safety while also encouraging participants to engage in the activity. Some possible roles include:



Figure 7. Hiking briefing

- **Hike leader:** Responsible for keeping the group on the correct path and setting a proper pace, making sure to stick to the schedule. They check the map or app and ensure everyone is following the route.
- **Safety coordinator:** Ensures everyone follows safety rules, such as using appropriate gear, and is ready to assist in case of an injury.
- **Tail-end coordinator:** Makes sure no one is left behind and that the group maintains a steady pace. They also inform the hike leader if anyone is struggling.

Safety measures and emergency plan

Safety measures are a critical part of any hike, so having an emergency plan is essential. To ensure safety, it's important to bring a **first aid kit, water, snacks, and to know the location of the nearest medical assistance**. Creating an **evacuation plan** ahead of time is also crucial—knowing where to get help or how to safely exit the route if needed.

Consider potential issues with mobile phone coverage, especially in remote or wooded areas. In places where service may be spotty, plan alternative communication options. Using **walkie-talkies** can help the hike leader stay in touch with all participants, as they work independently of mobile network coverage. For longer expeditions, satellite communication devices like the Garmin

inReach are useful for messaging and sending SOS signals in emergencies.

To effectively handle emergencies, a clear action plan is essential. For example, if a participant gets injured, the safety coordinator takes responsibility for providing assistance, while the hike leader organizes the evacuation or guides the group to a safe location. This ensures that help is provided quickly and efficiently, minimizing additional risks.

Risk identification and assessment

Hiking comes with certain risks that need attention. For instance, being near a river can be dangerous for younger children, so leaders and adults should keep a close watch on the group. Steep slopes also pose hazards, especially when trails are wet or icy, increasing the chance of slips and falls.

Staying on track is crucial, and checking the weather is equally important. Poor visibility due to fog or heavy rain can make navigation tricky, so it's useful to teach young people how to spot nearby landmarks and adjust the route if conditions become unsafe.

Group management and leadership during the hike

During the hike, it's important to assign leadership roles in advance to maintain order throughout the route. The leader or group coordinator is responsible for tracking the overall route and ensuring everyone follows the plan. The leader must be able to make quick decisions and assess risks effectively.

Implementing rotating roles is also key, allowing young people to take on various tasks during the hike. For instance, each participant can be given the chance to lead the group for short segments or manage the route app. This approach not only makes the hike more dynamic but also helps develop participants' leadership and teamwork skills.

Additionally, it's vital for every participant to be aware of the action plan in case of

unforeseen situations. For example, if someone strays off the path or falls behind, they should know how to contact the hike leader using walkie-talkies or predetermined communication channels. This ensures that all participants stay connected and can quickly reunite with the group or receive assistance if needed.

2.3 Weather forecasting and equipment selection

Preparing for a hike is key, and weather forecasting along with choosing the right equipment are important parts of the hiking plan. Weather conditions can change rapidly, especially on nature trails or in the mountains, so it's necessary to regularly check forecasts and be ready to adapt to any situation.

Preparing for different weather conditions: clothing and footwear choices

Select the right clothing for comfort and safety during a hike. A layered clothing strategy is best for adapting to changing conditions. Generally, **three layers** are recommended:

- **Base layer:** The layer closest to your skin should be made of materials that wick moisture and dry quickly, such as **merino wool or synthetic fabrics** (polyester, nylon), which are common in sportswear. Cotton is not suitable because it absorbs moisture and dries slowly, leading to chills.
- **Mid-layer:** This layer provides insulation. Wool or fleece clothing is ideal, as they retain heat even when wet. This layer can be easily removed if you get too warm.
- **Outer layer:** This layer **protects** against wind and rain. A waterproof and breathable jacket is essential to shield you from rain and wind while preventing overheating. In cold weather, a down jacket adds extra insulation.

Footwear is as important as clothing. The choice of shoes depends on the terrain and weather conditions. For hikes on rocky or mountainous paths, **waterproof hiking boots**

with good traction are recommended for stability and slip protection in wet conditions. For lighter, shorter hikes, durable, **lightweight athletic shoes** will suffice. It's important to wear shoes that are already broken in to avoid blisters or discomfort on longer routes.

Socks are also very important. Choose **socks made from moisture-wicking materials** to keep your feet dry, such as merino wool or synthetic blends. Cotton socks are not recommended for hikes, as they absorb moisture and dry slowly, which can lead to chafing and blisters. It's essential to select socks with appropriate thickness and cushioning for comfort and to protect your feet from pressure and friction during long walks. If the hike is expected to be longer or more challenging, bringing extra pairs of socks is helpful for changing if your feet get wet or dirty.

In addition to clothing and footwear, always carry **extra gear** like a rain poncho, hat, sunglasses, and gloves, especially if the weather might be unpredictable.

Choosing Hiking Equipment

In addition to clothing, selecting suitable hiking equipment is crucial. Consider the following:

- **Comfortable adjustable backpack:** Look for one with padded shoulder straps and a hip belt to ensure an even distribution of weight and reduce pressure on the shoulders and back. The hip belt stabilizes the pack and helps minimize fatigue during long hikes.
- **Waterproof cover for the backpack:** This protects your gear from moisture and prevents damage to electronic devices.
- **First aid kit:** A must-have for every hike, it should include band-aids, gauze, antiseptic wipes, and any necessary medications, such as antihistamines.
- **Communication tools:** Devices like two-way radios ensure reliable communication

among group members when mobile networks are unavailable.

- **Headlamp:** Essential for hikes during dusk or nighttime, it's also useful in emergencies. Always check that the batteries are charged or bring spare batteries.
- **Multi-tool:** This can be very helpful in various situations, from preparing food to making minor repairs on equipment.
- **Sun protection:** Items like sunglasses, a hat, and sunscreen are vital for sunny hikes to avoid sunburn and overheating.
- **Insect protection:** Particularly important in wooded or grassy areas, using insect repellent, wearing long sleeves and pants, and regularly checking for ticks can reduce the risk of bites.

Avoid unnecessary items - pack only what you truly need. The weight of the backpack should be manageable, as an overloaded pack can quickly become uncomfortable and make the hike more challenging.

Safety Requirements Based on Weather Conditions and Trail Difficulty

Safety during a hike depends on both the right equipment and the complexity of the trail and weather conditions. In rainy or wet conditions, using **trekking poles** can help maintain stability and balance on slippery surfaces. Poles are also beneficial for long-distance hikes.

Forecasting weather and regularly checking conditions is essential to avoid unexpected situations. Utilizing reliable weather forecasting apps, such as **Windy**, **AccuWeather**, or **YR.no**, can provide detailed weather updates. Another valuable resource is online webcams, which offer real-time insights into conditions along the route.

When planning hikes along coastlines or rivers, it's important to monitor water level changes. For this purpose, the **Tides app** provides accurate information about tides and currents. **The Sun and Moon app** is also helpful for

weather forecasting and route planning, as it provides information about sunrise and sunset times. This app is especially useful when planning hikes in areas where knowing the onset of twilight or complete darkness is critical, such as in mountainous or forested trails. It aids in better pacing the hike and selecting suitable spots for breaks or overnight stays to avoid unpleasant situations when darkness suddenly falls.

If an adult, like a teacher, parent, or guardian, is leading the hike, they should download and use these apps, since some may not be available for kids under 13. It's crucial for this adult to show the young hikers how to use the apps and explain their features, so they can learn to check the weather forecasts on their own and adapt to changing conditions in the future.

2.4 Meal and Activity Planning

During a hike, it's essential to ensure there's enough food and water, as well as to include educational activities and plan breaks that help boost team spirit and keep participants energized.



Figure 8. Information about natural values along the route



Figure 9. Students on lunch break

Meal and Water Consumption Planning During the Hike

Nutrition and hydration are key factors for maintaining participants' energy and well-being while hiking. Meals (Figure 9) should be planned to be portable, nutritious, and suitable for outdoor consumption. Here are some commonly useful food items for hikes:

- **High-energy snacks:** Nuts, dried fruits, energy bars, and cookies are great options.
- **Easily transportable foods:** Whole grain wraps with cheese, meats, hard-boiled eggs, tofu, or other protein sources, as well as sturdy fruits and vegetables that won't get squished in a bag.
- **Dehydrated meals:** These are particularly useful for multi-day hikes. They're available at specialized outdoor shops, are lightweight, and can be quickly prepared by adding hot water.

Staying hydrated is very important, especially in hot weather or during intense physical activity. It's recommended to plan for at least **1.5 to 2 liters of water** per participant per day. If there are water refill stations or natural water sources along the route, you can plan to replenish supplies along the way. However, it's crucial to verify the water's cleanliness beforehand or bring along **water filters or**

purification tablets, which can be found at outdoor stores.

Integrating Activities and Learning During the Hike

Going on a hike can be a valuable part of the learning process, enhancing young people's practical knowledge and teamwork skills. Activities can be designed to connect with subjects like science, geography, biology, or orienteering skills. Here are some ideas:

- **Orienteering challenges:** Assign each participant a task to locate specific points along the trail using a map and compass. This encourages navigation skills and teamwork.
- **Nature exploration:** Engage participants in identifying and learning about local plants or animals encountered along the way. For example, they can explore forest habitats and practice recognizing different tree and plant species.
- **Ecology lessons:** Incorporate topics on sustainability and waste reduction, teaching participants the principle of "leave no trace." This fosters an understanding of conservation and environmental protection while they enjoy the outdoors.

Rest Breaks During the Hike

Rest breaks during a hike are not only important for physical recovery but also for fostering teamwork and building stronger relationships among participants. It's recommended to plan **regular breaks every 1 to 1.5 hours**, especially on longer routes, so participants can rest, enjoy snacks, and hydrate. For example, during a 12 km hike, there could be two longer breaks and several shorter, 5-10 minute pauses. To make these breaks more meaningful, consider incorporating activities that promote cooperation and communication, such as:

- **Team-building games:** For example, the "knot game," where participants form a circle, hold hands, and try to untangle themselves without breaking the chain,

encourages problem-solving and teamwork.

- **Campfire conversations:** These moments can strengthen bonds between participants and offer a time for reflection on the day's experiences and lessons learned.
- **Shared meal preparation:** Whether it's making sandwiches, grilling vegetables, or roasting sausages over a campfire, preparing food together creates a positive and friendly atmosphere that strengthens relationships.
- **Feedback circle:** Each participant can share their thoughts on what they enjoyed, what challenges they faced, and what they learned. This activity encourages reflection and provides valuable insights for improving future hikes.

It's also necessary to give participants free time to simply enjoy nature without any planned activities. They can take in the scenery, listen to nature's sounds, or engage in personal conversations. This balance between structured activities and relaxation ensures that the hike becomes a well-rounded experience, offering both education and leisure.

3. Piloting

A pilot test is a small-scale trial conducted to evaluate ideas or methods before broader implementation. It helps identify potential improvements or risks and assess how successfully the project might operate in the future. As part of this project, a pilot test was carried out with the active involvement of the administration of Laurenču Primary School, who showed interest in engaging students in organizing hikes.

3.1 Hike with Laurenču School Students

In collaboration with the Laurenču Primary School science teacher, an online meeting (Figure 4-6) in the form of a webinar was organized on April 17, 2024, with 6th-grade students. During this session, they learned the skills needed to organize self-guided hikes. The

presentation was prepared by the head of organization "Movement Spontaneous" Matijs Babris.

The presentation covered hiking planning methods, focusing on key topics:

- Route analysis and map reading
- Event management plan and navigation
- Weather conditions and equipment selection
- Meal and activity planning

After the webinar, the class was given the following tasks:

1. Select a group leader, a deputy, and three additional individuals to be trained in using radios and added to the organizers' WhatsApp group
2. Prepare a route plan and a GPX file for the participants
3. Create a registration form, along with a list of equipment, clothing, and a time schedule

Recommended activities for the hike:

- An introductory and briefing circle
- Breaks and a lunch stop
- A feedback circle at the end of the hike

The student group chose one of the Baltic Forest Trail sections – No. 5 Sigulda-Līgatne [see Appendix 1], slightly shortening the final part of the route. Since the students are very active and athletic, they opted for a relatively long section. It's important to assess one's physical fitness during a hike, but also not to underestimate one's abilities.

The pilot hike took place on May 22, 2024, with 26 participants: 19 students, the science teacher, two parents, three representatives from "Movement Spontaneous" organization, and one representative from "Lauku Ceļotājs" organization. At the start of the hike, a briefing was conducted [see Appendix 2], and the most

active participants were given radios to relay information about rest breaks, the remaining distance, or to communicate in case of an emergency. Some students had printed maps from Baltictrails.eu, while representatives from "Movement Spontaneous" used the GPX files available on the website via smart devices to ensure the correct route in case of uncertainties.

The trail was well-marked with the Forest Trail signage (white-orange-white) and informational stands. [see Appendix 2] Along the way, several stops were made to share interesting facts about Forest Trail and the surrounding nature, as well as to rest and hydrate, because the day was particularly hot. After approximately 10 kilometers, a longer lunch break was organized, during which the students enjoyed healthy snacks and learned more about preparing food for hikes. [see Appendix 2]

After the break, there were about 10 kilometers left to hike through Gauja Valley. Some students took the opportunity to capture beautiful photos with Andra, a photographer from "Movement Spontaneous". The hike concluded at a parking lot with a rest area, where a feedback circle was held. Each participant had the chance to share what they enjoyed most and what they found most challenging.

Pēc vebināra klasei tika uzdoti uzdevumi:

1. Izvēlēties grupas vadītāju, vietnieku un vēl trīs cilvēkus, kuri tiks apmācīti izmantot rācības un pievienoti organizatoru WhatsApp grupai;
2. Sagatavot maršruta plānu un GPX failu dalībniekiem;
3. Izveidot reģistrācijas formu un aprīkojuma, apģērba un laika plāna sarakstu.

Ieteiktās aktivitātes pārgājienam bija šādas:

- Iepazīšanās un instruktāžas aplis;
- Atpūtas pauzes un pusdienu pārtraukums;

3.2 Piloting Feedback and Improvements

After the pilot hike, feedback was collected, providing valuable insights for planning and organizing future hikes. Based on the experiences of all participants, several improvements were identified that would help make the organization and management of future hikes more efficient.

Student Feedback

Participants enjoyed:

- Having a group leader from among the students
- Being outdoors and staying active
- Conversations with the "Movement Spontaneous" organizers, exchanging experiences and stories
- Learning how to use the radios
- Taking photos with a camera
- Route planning
- Animals and nature

Challenges faced by participants:

- The heat and sun
- The long distance, with a route over 20 km
- Finding a place for the large group to sit
- Walking the last few kilometers
- Mosquitoes

Teacher's Feedback

- The children chose the Forest Trail route themselves.
- The students' parents suggested shortening the route to end at the parking lot, optimizing both the distance and time spent on the hike.
- It was easy to follow the route using navigation tools.
- The students were independent and motivated, with no need for extra encouragement to keep moving forward.
- The students were excited about the hike, and the teacher felt proud of their responsibility and engagement.

- It was a valuable experience in the planning process – important aspects such as safety and preparation were thoroughly discussed.

The teacher is actively planning more hikes and is eager to continue organizing such activities with the students.

4. Recommendations

- **More thorough route selection:** The 20 km route proved too long for some participants. For future hikes, it is recommended to more carefully assess participants' physical abilities and the difficulty of the route, planning shorter or medium-length sections, especially for younger or less experienced groups.
- **Time management:** Some activities during the hike took longer than initially planned, leading to fatigue towards the end of the hike. It is advisable to plan rest breaks and activities more precisely, ensuring they are spaced evenly and frequent enough.
- **Better route accessibility for the entire group:** Not all participants had access to a physical or digital map of the route, causing confusion in areas where trail markings were damaged.
- **More detailed first aid training:** Although there were adults present who were trained in first aid, it is recommended to provide basic first aid training to students before the hike. This would increase safety and preparedness in case of emergencies.
- **Integrating hikes into the learning process:** Hikes not only promote physical activity and teamwork among students but also offer educational opportunities across various subjects. For example, science lessons can be integrated into hikes by teaching about the environment and navigation in a practical way. History lessons could also become more engaging by organizing hikes to culturally or historically significant sites, where students can learn about events in history.

Additionally, incorporating such activities during project weeks ensures they do not interfere with regular lesson plans or students' holidays, while offering a meaningful and educational alternative to traditional teaching methods. This fosters closer collaboration between teachers and students, developing teamwork and organizational skills.

Other suggestions

- Plan the hike carefully, considering the difficulty level of the route, trail conditions, and weather forecasts.
- Check the weather regularly.
- Inform a family member about your planned route and expected return time.
- Familiarize yourself with trail markings and signs to stay on track.
- Dress in layers, choose durable hiking shoes, and protect yourself from the sun with SPF cream, a hat, and sunglasses.
- Ensure you have enough water and food.
- Take regular breaks and listen to your body's signals.
- Be alert and watch your surroundings, especially for unstable terrain, wildlife, and changing weather conditions.
- Stay on the chosen trail and avoid unknown or restricted areas.
- If you encounter wildlife, maintain a safe distance and do not create stress for them.
- If hiking in a group, maintain visibility with each other and communicate regularly.
- Follow the principle of "Leave no trace," respecting nature and minimizing your impact on the environment.

5. Partners Involved

NGO “Movement Spontaneous” (Latvia), Vidzeme Planning Region (Latvia), Setomaa Regional Municipality (Estonia).

6. Training Video

The training video can be viewed here (08:02 min):

<https://www.youtube.com/watch?v=Hd4524foLcY>



7. Useful Resources

- **Webinar** on conducting self-guided hikes (in Latvian): <https://youtu.be/VeEhe2cgNH4>
- **Educational film** made within this project summarizing these guidelines: <https://youtu.be/26r4xo8f9lw>
- **Coastal Trail** and **Forest Trail** hiking routes and information: <https://baltictrails.eu/lv/>
- **Google MyMaps** allows you to customize maps by marking routes, travel points, and adding annotations: <https://mymaps.google.com>
- **Strava** is a popular app that allows you to track your hiking routes and share achievements with other users: <https://www.strava.com/>
- **Outdoor Active** is a navigation app offering hiking and tourism maps, as well as route planning options: <https://www.outdooractive.com/>
- **The Komoot** app helps plan adventure hikes, offering routes and navigation: <https://www.komoot.com/>
- **Locus Map** is a navigation app with extensive functionality, suitable for hiking, cycling, and other outdoor activities: <https://www.locusmap.app/>
- **Mapbox** is a cartographic tool with customizable maps and navigation options: <https://www.mapbox.com/>

Using Digital Tools in a Hiking

1. Objective

The Accessible Hiking Trails initiative aims to enhance hiking safety and accessibility by using online tools and digital solutions. Digital platforms provide real-time information, improve route planning, and ensure safe navigation in diverse terrains and weather conditions.

These guidelines **help hikers, tourism organizers, and outdoor groups** integrate digital resources into their hiking experience, covering:

- Weather forecasts and emergency alerts.
- GPS tracking and navigation apps.
- Digital trail databases and community platforms.
- Real-time information from webcams and local reports.
- Online tools for group coordination and communication.

By using these solutions, hikers can **avoid risks, improve preparation, and enjoy safer, more inclusive hikes.**

2. Packing and Equipment with Digital Support

Carrying the right gear is crucial for comfort and safety. Online resources help organize packing lists, find gear recommendations, and avoid overpacking or missing essentials.

Best Online Packing List Tools

Interactive Checklists:

☒ **Trello Boards** – A project management tool that helps organize hiking plans, gear lists, and trip details with customizable boards. **How to use:**

Create a board, add checklists, and track progress. <https://trello.com/>

☒ **PackPoint** – A packing list app that suggests what to bring based on your destination, weather, and activities. **How to use:** Enter your trip details, and it generates a customized list. <https://www.packpnt.com/>

☒ **LighterPack** – A minimalist packing list tool that helps hikers track the weight of their gear. **How to use:** Add items to your list, and it calculates the approximate total pack weight. <https://lighterpack.com/>

Hiking Gear Reviews: YouTube channels, outdoor blogs, Reddit forums.

Rental and Second-Hand Gear Platforms:

☒ **Facebook Marketplace** – Platforms for buying, selling, or renting hiking gear. **How to use:** Search for hiking equipment in your area, filter results, and contact sellers or renters. <https://www.facebook.com/marketplace/>

☒ **Local Outdoor Rental Services** – Platforms that allow hikers to rent outdoor gear instead of purchasing it, making hiking more accessible and cost-effective. **How to use:** Visit the website, browse available gear, check rental terms, and book equipment for your hike. [Gandrs](#) , [Rover](#), [Adventure Rent](#) in Latvia, [Hiking in Estonia](#) , [360](#), [Matkarent](#) etc. in Estonia.

Practical Tips:

- Use a digital checklist to avoid forgetting essentials.
- Check weather-based packing recommendations in apps to adjust gear.
- Find gear rental options online if you lack equipment.

Basic Packing List:

- Navigation: Smartphone or smart watch with GPS apps, power bank, printed backup map.
- Weather Protection: Waterproof jacket, layered clothing, UV protection.
- Safety Gear: First aid kit, whistle, flashlight, emergency blanket.
- Food & Water: Lightweight, energy-rich snacks, at least 2L of water, portable water filter.

- Emergency Items: Multi-tool, duct tape, fire starter, backup batteries.

3. Weather Conditions

Weather conditions significantly affect hiking safety. Sudden storms, temperature drops, or fog can make trails dangerous or impassable. Online weather tools help hikers plan accordingly and avoid hazardous situations.

Best Online Tools for Weather Monitoring:

☒ **National Weather Websites** – Official sources for country-specific weather forecasts and alerts. **How to use:** Search for your country's weather service and check conditions before your hike. <https://videscentrs.lv/gmc.lv/> for Latvia, <https://www.ilmateenistus.ee/> for Estonia.

☒ **Global Forecast Apps:**

- **Windy** – A detailed weather map with wind, precipitation, and temperature data. **How to use:** Search your location, view real-time maps. <https://www.windy.com/>
- **MeteoBlue** – Forecasting app with weather models for hiking. **How to use:** Enter a location and check short/long-term forecasts. <https://www.meteoblue.com/>
- **Yr.no** – Norwegian weather service with global forecasts. **How to use:** Search your location for weather updates. <https://www.yr.no/en>
- **AccuWeather** – A weather app providing localized forecasts and severe weather alerts. **How to use:** Check your location's current and future weather. <https://www.accuweather.com/>

☒ **Tides** – An app providing tide forecasts and water level data, essential for coastal hiking and planning around tidal changes. **How to use:** Select a location to view tide charts, high and low tide times, and real-time water conditions. <https://www.tideschart.com/Tides-App/>

☒ **Sun and Moon** – A tool for tracking sunrise, sunset, moon phases, and daylight duration, useful for planning hikes with optimal lighting. **How to use:** Enter your location to see solar and lunar data, including golden hour and moonrise times. <https://sun-moon-app.com/>

☒ **Real-Time Alerts** – Local emergency services and government alert systems providing weather

warnings. **How to use:** Enable notifications from national authorities for real-time updates.

What to check before the hike:

- Temperature, wind speed, precipitation, storm warnings.
- Long-term vs. short-term forecasts and their reliability.
- Interpreting weather data: how to read radar maps, precipitation charts, and wind forecasts.

Practical Tips

- Check multiple sources for accuracy before the hike.
- Use alerts and notifications for sudden weather changes.
- Plan alternative routes in case of adverse conditions.

4. Web Cameras for Real-Time Trail Conditions

Web cameras provide real-time visual updates on trail conditions, visibility, and congestion. This information is especially useful for determining whether a trail is safe and accessible before setting out.

Where to Find Them:

☒ **National Parks, Ski Resorts, and Nature Reserves** – Many official park websites offer live webcams covering popular hiking areas, helping hikers check real-time trail conditions. **How to use:** Visit the official website, select a webcam location, and view live images to assess weather, visibility, and trail congestion, [Baltic Coastal Trail Webcams](#), [Forest Trail Webcams](#), [Latvia: eRadio Webcams](#), [Baltic Live Cam: Estonia](#), [Outdooractive, Webcams in Latvia](#), [Outdooractive, Webcams in Estonia](#) etc.

☒ **Local Road Cameras** – Online road cameras help check real-time road conditions before departure, ensuring safe access to trailheads, especially in snowy or rainy seasons. **How to use:** Visit the official road authority website, select a camera location near your route, and review live footage for weather and traffic conditions. [Latvian State Roads Cameras](#), [Estonian Road Cameras](#)

☑ **Community-Shared Camera Feeds** – Platforms like Windy and hiking forums provide access to live webcam feeds for lesser-known trails, helping hikers assess conditions before setting out. **How to use:** Visit the website, search for your desired location, and view available live camera feeds. www.windy.com/-Webcam

Consider limitations such as delays in updates – some webcam images may not refresh frequently, so always double-check timestamps. It is also recommended to cross-reference webcam visuals with weather forecasts to get a more accurate and complete picture of current conditions.

5. Navigational Tools with GPS

Getting lost or misjudging the terrain is a common risk. GPS tools ensure safe navigation, prevent detours, and help track progress.

Best Online Navigation Tools:

Hiking Route (GPX file) Databases:

☑ **Baltictrails.eu** – A website providing official Baltic hiking trail maps and information. **How to use:** Browse trail routes, download maps. <https://baltictrails.eu/>

☑ **Komoot** – A hiking and biking route planner with offline maps. **How to use:** Plan a route, download maps for offline use, and track your progress. <https://www.komoot.com/>

☑ **AllTrails** – A database of hiking routes with user reviews and GPS tracking. **How to use:** Search for specific trails, download GPX file, and track your hike. <https://www.alltrails.com/>

GPS Navigation Apps:

☑ **Strava** – A fitness tracking app that allows hikers, runners, and cyclists to record their routes, monitor performance, and share achievements with others. **How to use:** Download the app, start recording your hike, and track your distance, elevation, and time. You can also analyze stats and share your routes with the Strava community. <https://www.strava.com/>

☑ **Google MyMaps** – A tool for creating custom hiking maps. **How to use:** Mark waypoints, add notes, and share your route. <https://www.google.com/mymaps>

☑ **Outdoor Active** – A navigation app with hiking, biking, and outdoor sports maps. **How to use:** Plan and follow GPS routes. <https://www.outdooractive.com/>

☑ **Locus Map** – A GPS mapping app for offline navigation and live tracking. **How to use:** Download maps, track routes, and record hikes. <https://www.locusmap.app/>

☑ **Mapbox** – A customizable mapping platform for navigation apps. **How to use:** Developers can integrate maps into their hiking applications. <https://www.mapbox.com/>

☑ **Maps.me** – An offline map app for detailed hiking trails and city navigation. **How to use:** Download maps for offline use and navigate without internet. <https://maps.me/>

Practical Tips:

- Download GPX file maps beforehand to use them offline in case of weak signal areas.
- Use live tracking to share location with a trusted contact.
- Mark waypoints such as water sources or shelters for safety.

6. Platforms for Trail Updates

Trail conditions change due to weather, maintenance, or natural hazards. Checking online updates reduces risks and helps in planning.

Best Online Resources for Trail Updates:

- Webcams: Live views from national parks or hiking areas.
- Hiker Communities: Facebook Groups, Reddit, local forums.
- National Park and Tourism Websites: Official updates on closures, permits, and advisories.
- Apps with hiker-reported issues: [Komoot](https://www.komoot.com/).

Practical Tips:

- Check webcams before leaving to assess trail visibility.
- Join local hiker groups for real-time reports.
- Report hazardous conditions to help other hikers.

7. Communication and Safety

Staying connected is essential, especially in remote areas. Online communication tools help groups stay organized, share updates, and respond to emergencies.

Best Online Communication Tools:

Group Chats: ☒ **WhatsApp, Telegram, Signal** – Messaging apps for group coordination before and during hikes. **How to use:** Create a group chat, share updates, and enable location sharing. [Whatsapp](#) , [Telegram](#) , [Signal](#) .

Event Coordination:

☒ **Facebook Events** – A tool for organizing hiking events and inviting participants. **How to use:** Create an event, set details, and invite hikers. <https://www.facebook.com/events/>

☒ **Google Forms, Airtable** – Tools for collecting hiker personal information and preferences. **How to use:** Create a form to gather participant info, share link of the form on event page or other communication channel. Google Forms: <https://forms.google.com/>, Airtable: <https://www.airtable.com/>

Emergency Location Tools:

☒ **Google SOS Alerts** – Emergency notifications for disasters, road closures, and extreme weather. **How to use:** Enable notifications to receive alerts. <https://www.google.org/crisisresponse/>

Offline GPS trackers.

Practical Tips:

- Create an online group chat for hike details, updates, and emergency contacts.
- Use online registration form for participant registration and preferences.
- Share real-time location using GPS apps.
- Save emergency numbers in your phone before the hike.
- Carry a power bank to keep devices charged.

8. Post-Hike Feedback and Data Tracking

Recording hike details helps improve future experiences and builds a hiking community.

Best Digital Feedback Tools:

- Surveys: Google Forms, Airtable, Typeform.
- Route & Performance Tracking: Strava, Komoot, Outdoor Active.
- Community Sharing: Facebook groups, Instagram, hiking blogs.

Practical Tips:

- Create a post-hike survey to improve future events.
- Share trail insights on hiking forums.
- Analyze participation trends using Google Sheets.

9. Final Online Tool Checklist

- ☒ **Preparation:** Trello Boards, Google documents
- ☒ **Weather Apps:** Windy, Yr.no, AccuWeather, Tides, Sun and Moon.
- ☒ **Webcams:** National park webcams, Baltictrails Maps Webcams, road cameras.
- ☒ **Navigation Apps:** Strava, Google MyMaps, Outdoor Active, Komoot, Locus Map, Map box, Maps.me.
- ☒ **Emergency Services:** Google SOS Alerts.
- ☒ **Communication:** WhatsApp, Signal, Telegram.
- ☒ **Trail Updates:** National park websites, Komoot, hiker forums.

Summary

Online tools have significantly enhanced hiking safety by providing essential information on weather, trail conditions, and navigation. By integrating these resources into their preparation, hikers can mitigate risks and maximize their outdoor adventures.

However, no digital tool can replace good judgment and preparedness. **Always carry essential gear, inform someone of your plans, and be ready to adapt if conditions change.** With the right combination of technology and common sense,

hikers can safely explore the great outdoors with confidence.



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