

# RISK AND SAFETY MANAGEMENT SKILL BUILDING IN ADVENTURE TOURISM DESTINATIONS

## INTRODUCTION COURSE





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The handbook is based on tools and templates available on [www.riskmanagement4tourism.org](http://www.riskmanagement4tourism.org).  
The handbook will be updated on a regular basis in close collaboration with practitioners and professional associations.

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# INTRODUCTION

Adventure tourism is one of the fastest growing sectors in tourism by attracting high value customers, supporting local economies and encouraging sustainable practices. Adventure tourists are mostly staying longer, spending more and interacting with local populations, yet often described as 'experienced-based' holidays.

Adventure activities can be quite varied from joining an archaeological expedition, bird watching, camping, caving or hiking...From travelers' perspective the definition of adventure activity is always shifting. In this context, with its cultural heritage and natural setting, culinary richness Turkey provide wide range of activities for adventure travelers. According to the Adventure Travel Trade Association (ATTA) Index 2018, Turkey ranked in the 3rd place in Eastern Europe and Central Asia Region and considered as one of the growing markets since 2008.

The choice of adventure travelers is influenced by many elements such as natural beauty, available activities and destination climate. Among these decision factors, safety is a vital component and Travelers are more and more aware of risks associated with journeying to foreign countries and safety is an important criterion in their choice of destination. Issues such as experience of adventure travel guide, facilities to provide proper health services for injuries, safe transport, emergency procedures... play an important role on the perception and reputation of the destination as 'safe'.

This Handbook is composed of two chapters. In the first chapter, we are making introduction to the risk and safety concepts by explaining why it matters for tourism actors. In the second chapter we explain how to implement a risk and safety management plan with key steps.



## CHAPTER 1:

# Why do we need risk and safety management system?

## 1.1. ADVENTURE TOURISM AND RISK

In varying degrees, risk is present in all adventure experiences, however in the context of this handbook, we focus on the risks that are of concern in the tourist services, particularly those which might impact people's health. A risk can simply be described as the **likelihood that a person(s) may be harmed, damaged or suffer adverse health effects if exposed to a hazard. However, assessing risk could be extremely challenging depending on the perception of the individuals and circumstances.** It is highly linked to various factors such as environmental conditions, guide skills, visitors skills, infrastructure, health services, equipment conditions: As an example tandem paragliding could be fatal in bad weather conditions with an inexperienced instructor; not wearing seatbelt could easily cause injuries, or simply tasting street food could end up with food poisoning.

When we examine the concept of risk, we need to keep in mind that it is inherent; risk exist in outdoor adventure activities and it is expected and integral part of the activity. Most visitors prefer adventure activities due to risk factor and it is manufactured; as tour operators or guides we provide services with the understanding that there is a risk.

Yet, we are different from one another on how we perceive some issues as risky or dangerous. Factors such as cultural practices, country context and circumstances could easily impact our attitude or perception. For instance, it can be thought completely ok to take a selfie on a cliff by passing the warning sign, or getting in the car and not putting seatbelt, or go on a hiking with flip flaps.

As a sector, hosting numerous visitors from all around the world, we need to consider these differences in terms of perception and apply standards that are acceptable and provide basics for safety. The safety standards might vary based on the country legal framework or international requirements; however, all tourists expect safety. Furthermore, safety is also a major criterion for international tour operators while deciding their partners. Therefore, the answer to why question is quite straightforward: because

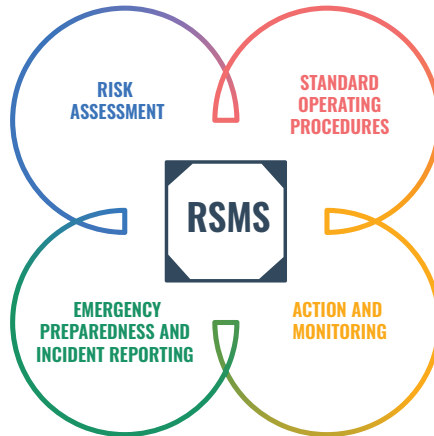
- our customers expect safe services
- international market expects risk management
- any accident can damage our business seriously and;
- most importantly we are responsible for our customers safety

But how do we address the issue of safety systematically?

The use of risk and safety management is a very common approach not only in tourism but in many other industries. We define risk and safety management for tourism as **is a management system that focuses on ensuring safety of tourists/clients and staff by efficiently managing operational risks through leadership commitment, clearly defined responsibilities, roles, processes and procedures (e.g. SOPs, EPP, Incident Reporting), building capacity among staff with training; and monitoring of practices and results with objectives and targets.**

## It contains at least the four elements

In order to identify the risks, we need to conduct a risk assessment (which we will explain in detail in Chapter 2). All management system requires sets of documents and we need instructions guidelines and checklists to control measures, skills, equipment; thus, standard operating procedures helps us to have unified processes. Despite the maximum efforts, emergencies can still happen and for minimizing the damage we need to have emergency plans and record accidents to understand root causes and take necessary measures. Finally, we need to monitor and review the system on continuous basis to reach to results we wanted to achieve.



**Having a risk and safety management system could provide us many benefits such as:**

- Minimizing the number of accidents
- Maximizing customers satisfaction
- Protecting and enhancing our customer satisfaction
- Portray professional image
- Reduce litigation
- Reduce compensation pay
- Reduce cost
- Sleep at night avoid moral guilt

**But on the other hand, implementing a risk and safety system can also be demanding process:**

- It will require time and resources
- You might have difficulty to convince your staff and suppliers due to it has never happen to me and it will never happen to me perception. The most difficult part could be raising awareness in this issue, especially if you are operating in a low safe-conscious environment.
- You might not know how to implement a RSMS
- You might be operating in a country where there is very few or no requirements for risk and safety or they barely enforced.
- Finally, you might not have trained staff to implement a RSMS

However, considering the consequences, and results of having an accident, you can overcome by these challenges with right methods.

Firstly, let's start with the most difficult one: **changing the perception: it has never happened to me and it will never happen to me**

Some risks arise as a result of one's thoughts, actions and decisions. Choosing choices called risk taking or risky behaviors can vary from person to person and even from different behaviors of the same person. Some people can take huge risks while others can avoid all. The risk perception is an important concept in this context.

- Mental stress plays a role in how we perceive and understand risk around us
- Human don't intuitively understand probability
- Human tends to think of certain categories of risk as riskier than others in spite of all the available statistical evidence
- People tend to be more accepting of risk associated with things that have chosen to do.

As humans, we have the tendency to believe that bad things won't happen to us which is also called as optimism bias. As an example; 67% of the smokers perished from smoking related illness and in can boost the risk of 13 types of cancer, but a smoker has the tendency to believe that he/she will be on the 33% without the illness.

As another example, an average driver can have minimum 4 accidents in a lifetime (not necessarily deadly), so statistics shows that accidents happen, and they can also happen to us. In fact, in terms of road accidents, Turkey is the second country with the greatest number of accidents in Europe. 90% of these accidents related to drivers' fault.



In this context Henrich Bird Safety pyramid is a good illustration showing how small incidents lead to big ones. The application of the pyramid to adventure activities can be debatable however it is clear that if we can identify and minimize those causes, we can also reduce the likelihood of a serious accidents.

## 1.2. REGULATORY FRAMEWORK AND RISK AND SAFETY MANAGEMENT

Although numerous types of global standards and quality assurance systems with relevance to the adventure tourism exists, a variety of approaches to managing adventure travel can be found around the world. The only standard certification is the ISO 21101, however most destinations preferred to regulate the matter through national certification mechanisms. While providing safe services is our responsibility, we would also like to note that it is also market requirement.

Most destinations are working collaboratively with public institutions to establish their country image as 'safe destinations'. In some countries such as New Zealand, Iceland, UK, there are detailed government regulations specifying needs and requirements for particular activities, while in some countries there are no active standards at all. Below we provided two examples from countries that developed their internal standards and certification.





## 1.2.1. Country Examples

### Iceland Experience

As a one of volcanically active areas of the world, Iceland is an interesting case study as this tourist booming over the last couple years was not expected from the public authorities. Despite the eruption of Eyjafjallajökull in 2010, which was a big concern, Iceland has been able to turn these negative events into a relative success story. (1)

After the eruption, an expensive image campaign was launched under the title “Inspired by Iceland.” As a result, tourism has changed the structure of economy and tourism’s share of foreign exchange earnings has grown from 26.4% to 42.0% between 2013-2017 according to measurements on the export of goods and services. (2)

In addition to successful publicity campaigns, it is the country's high sensitivity to the issue of safety that made the Iceland today's one of the popular destinations of adventure tourism. The Icelandic Act on Working Environment, Health and Safety in Workplaces No. 46/1980 (3) is intended to ensure a safe and healthy working environment in accordance with guidelines and instructions from the Administration of Occupational Safety and Health.

In 2010, the Icelandic Association for Search and Rescue team implemented an accident prevention project called SafeTravel, (4) aiming to provide travelers with education and resources for safe travel in Iceland. Today, the project is active on social media, running series of safety information, safety alerts for the visitors.

The Icelandic Tourist Board also manages Vakinn, a quality and environmental certification system for Icelandic tourism.

- The aim of Vakinn is to strengthen quality, safety and environmental awareness within Icelandic tourism by means of guidance and support in addition to promoting social responsibility of tourist service providers in the process.
- For its members, Vakinn is an effective tool to increase quality and safety, providing diverse supplementary materials, guidelines, data and checklists that are useful in improving operating procedures. (5)



1 Invest in Iceland, Long-term Strategy for the Icelandic Tourism Industry, 2013, <https://www.government.is/library/04-Legislation/Act%20No%2046%201980%20with%20subsequent%20amendments%202018.pdf>

2 Tourism in Iceland in Figures 2018, <https://www.ferdamalastofa.is/static/fjfiles/ferdamalastofa/Frettamyndir/2018/oktober/tourism-in-iceland-2018.pdf>

3 Act on Working Environment, Health and Safety in Workplaces, No. 46/1980, <https://www.government.is/library/04-Legislation/Act%20No%2046%201980%20with%20subsequent%20amendments%202018.pdf>

4 SafeTravel, <https://safetravel.is/about-us>

5 Vakinn, <https://www.vakinn.is/en/about-vakinn>

## Case Study: New Zealand

New Zealand is seen as a pioneer of adventure tourism, first for its domestic market and then increasingly for foreign visitors. The country is marketed and perceived as an outdoor adventure destination. New Zealand has been very successful in attracting people not only with its incredible nature, but also with its strong focus on safety measures in adventure tourism.

In response to high profile adventure accidents in 2008, a nationwide review of the adventure tourism industry in New Zealand was conducted in 2009-2011. The results of this review lead to the development of a mandatory auditing system for all adventure tourism businesses. (6)

The Health and Safety in Employment (Adventure Activities Regulations 2011) sit under the Health and Safety in Employment Act 1992. They require those commercial adventure tourism and outdoor operators in New Zealand who provide adventure activities to undergo a safety audit and become registered. (7)

The regulations require commercial operators who provide adventure activities, as defined by the regulations, to pass safety audits and become registered by WorkSafe New Zealand.



### According to the law;

- Passing a safety audit is also required for registration.
- WorkSafe must develop and continue to review safety audit standards specifying the requirements that adventure activity operators must comply with to reduce risks when providing adventure activities.
- Safety audit standards must include requirements to manage the risks of drug and alcohol use by operators and their staff.
- WorkSafe may publish a safety audit standard, or a change to a safety audit standard, by notice in the New Zealand Gazette.
- Safety audits are performed by safety auditors recognized by WorkSafe. Safety auditors are engaged directly by operators.
- A safety auditor must audit an operator for compliance with the safety audit standard that applies to the adventure activities provided by the operator.
- If the operator passes the safety audit, the auditor must issue a safety audit certificate to the operator that specifies the adventure activities that were audited.
- Safety audit certificates are valid for a period specified by the auditor up to a maximum of three years. Renewal is required on or before the expiry date.
- An auditor may issue a certificate subject to any conditions the auditor considers are required to maintain the safety of the activities, as consistent with the safety audit standard.

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6 Mackenzie S., The Evolution of Adventure Tourism in Aotearoa/ New Zealand: Current Trends & Future Issues, [https://www.researchgate.net/publication/316659344\\_The\\_evolution\\_of\\_adventure\\_tourism\\_in\\_AotearoaNew\\_Zealand\\_Current\\_trends\\_future\\_issues](https://www.researchgate.net/publication/316659344_The_evolution_of_adventure_tourism_in_AotearoaNew_Zealand_Current_trends_future_issues)  
7 Adventure Activities Regulations, <http://www.supportadventure.co.nz/adventure-activities-regulations>

The Safety Audit Standard for Adventure Activities, dated March 2013, updated in as the Standard 2017. The reasoning of this update is to make consequential changes resulting from: the creation of WorkSafe in 2013; the Health and Safety at Work Act 2015; and the Health and Safety at Work (Adventure Activities) Regulations 2016.

- This new version also clarifies the language about different technical roles supporting the operator and the audit team.
- This standard sets out the requirements of a safety management system (SMS) for operators that provide the adventure activities covered by the Regulations.
- In addition to the regulated requirements for registration, the scope of this standard includes ancillary services provided by an operator to participants where such services involve serious risk (such as, for example, of-road transport to or from an adventure activity). (8)

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8 Safety Audit Standards for Adventure Activities, New Zealand,  
<https://worksafe.govt.nz/%2Fdocsdocument%2F1634-safety-audit-standard-for-adventure-activities&usg=AOvVaw11EnQrujUelfyY8Lh5u41V>





## 1.2.2. Local Legal Framework

Assessing the legal framework is particularly important while identifying and assessing the risks. Firstly, knowing the legal framework will allow you to assess your compliance with the law (e.g. if license is required for mountaineering hike, does all your guides have valid training and license?), secondly in cases where there is no or weak standards, it will allow you to create your own code to prevent the risks.

### What to check within the legal framework?

- In majority of the countries, tourism is also under the scope of occupational health and safety laws. It is advised to examine the health and safety requirements for your business as an employee
- Check the profile of your guides and required skills for activities: do they have first aid certificates? Do they have special licenses or trainings for specific tour activities?
- In case you provide tours on water sports, mountaineering and any other type of hard activities check the local requirements, licenses
- Review your contracts with your transport companies, boats, accommodations to see if they comply with relevant regulations.



### Draft Legal Control List for Tour Operators:

**We advise you to review following points to ensure that you are in compliance with national rules and regulations**

- Risk assessment & action plan
- Tour Operator licenses
- Insurance requirements for safety
- Contracts with suppliers (excursion providers, transport companies, boats) whether they are covering safety issues
- Licenses and work permit of guides
- Guide training and required licenses (diving, ballooning, mountaineering...)
- Permits of the sportive activities' providers based on the local authorities' legislations

## CHAPTER 2:

# How do we implement risk and safety management system?

There are four basic elements that needs to be present in a risk and safety management system: risk assessment, standard operating procedures, emergency preparedness plan and incident recording, action and monitoring plan.

### 2.1. RISK ASSESSMENT

Risk Assessment is the process in which the risk of a hazard occurring in evaluated and the availability and efficiency of control measures are considered. Assessed risks are defined as acceptable or not for specific types of tours. Risk assessment includes:

- identifying risk factors/hazards
- assessment of the likelihood that the hazard will occur and the seriousness of the consequences of such an event
- evaluation of whether the risk is within acceptable limits set by the operator, national laws, tourists and/or international standards

We assess the risks in order to find the necessary and suitable measures to minimize them. The following chart that is taken from VAKINN Safety Plan for Tourism illustrate the process: (9)



In order to conduct a risk assessment, you need to first decide on the scope: which activities, products or services will be assessed? We advise you to cover all your activities/ products however based on limitations such as human resources, time... you might first want to dedicate your efforts for your activities that:

- Are most popular and used by the majority of your customers
- Are conducted by your own organization
- Are considered as high risk-hard adventure activities

In case you are still undecided on how to decide to categorize the activities according to risk factor, you can also refer to the Iceland official certification scheme on tourism:

Vakinn table : (10)

9 Vakinn, Safety Plan for Tourism,  
<https://www.vakinn.is/static/files/Enska/safety-plan-for-tourism.pdf>

10 Vakinn, Safety Plan for Tourism,  
<https://www.vakinn.is/static/files/Enska/safety-plan-for-tourism.pdf>

Category	Explanation	Illustration
I	Everyday risks which we expect and can cope with	Trips to museums, walks in urban areas
II	Risks which could be attributed to the inexperience of participants e.g. the handling of vehicles or when in unusual circumstances. Risk of accident is present	Horse rental, walking in rural areas
III	Participants are placed in the position of being at risk from health endangering circumstances, if those are not diverted by the service provider	Diving, rafting, caving

## Step 1: Identification of the risk factors-hazards

Once we decide the scope-tour of the assessment, we need to identify the risk factors-hazards. The types of risk factors might vary based on different factors such as tour conditions, type of the activity.

For instance, while hard adventure tourism/activities can involve an element of physical danger or risk (e.g. diving with sharks, bungee jumping, mountaineering...) and require intense commitment and advanced skills; soft adventure activities have low level of risk and require beginning skills (e.g. hiking...). Yet, the risk level does not solely relate to the activity type; other factors as physical environment, group characteristics, equipment can play an important role.



### Physical Environment-Venue

**Temperature:** Is it very hot/cold/humide?

**Conditions:** How are the road/river/trail conditions?

**Time of the day:** Is it getting dark soon?

**Weather:** Are there any predicted storms, floods?

**Nature:** are there any dangerous or wild animals, insects?



### Group Characteristics

**Groups size for the activity** (e.g. is it safe to have a large group of all on kayaks at the same time in a strong river current?)

**Personal health and ability:** all the members of the group fit enough to do the activities? are there any medical conditions to consider?



### Equipment

**Equipment for activities:** is there enough equipment for everyone to safely do the activity? e.g. life jackets, riding helmets...Is the equipment is in good conditions? in appropriate size for the tourists?

**Transportation:** are the vehicles safe ? First aid kits available ?

**According to Dan Meyer matrix there are three type of conditions that might lead to accidents:**

- **Potential Unsafe Conditions due to** falling objects, inadequate area security (physical, political, cultural), weather, equipment clothing, swift cold water, animals plants, physical/psychological profile of participants and/or staff
- **Potential Unsafe Acts due to** inadequate protection, inadequate instruction, inadequate supervision, unsafe speed (fast/slow), inadequate or improper food-drink-medications, poor position, unauthorized/improper procedure (includes failing to follow directions)
- **Potential Errors in Judgement due to** desire to please others, trying to adhere to a schedule, misperception, new or unexpected situations (includes fear and panic), fatigue, distraction, miscommunication, disregarding instincts (11)

While identifying possible hazards, we advise you to first consider an activity-event and all necessary skills to conduct these activities. For instance, some of the soft adventure activities (e.g. hiking) can simply be assessed as low risk, however, issues such as lack of information session about basic rules of hiking, lack of experience of guide to manage the group or unsuitable clothing from one of the group members could easily lead to an accident. Thus, it might also be helpful to review the skills and experience of the staff and assess their knowledge on the risks. E.g. Does all our guide provide information about the risks at the beginning of the tour? Are our drivers aware of the necessity to put on seatbelts? Does our guide have the necessary time management skills to finish the tours before the sundown? Does our guide have the necessary knowledge and skills to act on emergencies? These types of questions are especially important for understanding risks based on your capacities and staff skills. After identifying the risks related to activity, you can also consider other points such as physical environment (choosing a suitable hiking destination for beginners; good weather conditions); matching risks to participants capabilities (e.g. will it be a beginner hiking? Will it require good health or experience? Can children join?) and equipment (e.g. what would be the proper equipment? First aid? Transport?)

Here we provide two sets of examples on identified risks for soft adventure activity (trekking) and hard adventure activity (Alpine Hiking). In the below, you will see an example from Scotland 'Going out There: The Scottish Framework for Safe Practice in Off-site Visits', a set of risks identified for a trekking activity (12)

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11 Integrated Risk Management for Leisure Services, Robert Kauffman, Merry Moiseichik,  
<https://books.google.co.za/books?id=dvj6DwAAQBAJ&pg=PA112&lpg=PA112&dq=dan+meyer+matrix&source=bl&ots=XjXqTNDxSY&sig=ACfU3U0icrdtqEN5uoe7cjdW67Uuwg&hl=tr&sa=X&ved=2ahUKEwjJvmySLmAHULiFwKHYPRB5MQ6AEwBHoECAkQAQ#v=onepage&q=dan%20meyer%20matrix&f=false>

12 Toolkit Adventure Activities  
<https://www.goingoutthere.co.uk/toolkits/toolkit-adventure-activities/>

<b>Description of Task/Activity</b>	This is an example of a site-specific risk assessment for a hill walking activity and it includes elements of the operating procedures for a particular venue and local authority.  Duke of Edinburg Silver Training Expedition-3-day trekking
<b>Location</b>	Trossachs: Glen Finglass to Strathyre to Collander

Item	Hazard
1	Incompetent staff
2	Inappropriate plan
3	Inappropriate behavior at campsites
4	Cooking and stoves
5.a.	Adverse weather (cold/wind-chill)
5.b	Adverse weather (heat risks)
6	Fall/slips
7	Issues with river crossing
8	Adder bite
9	Issues with traffic
10	Benightment
11	Medical issues and potential exhaustion
12	Delayed access to emergency services

The New Zealand government provide a very detailed Activity Safety Guidelines for adventure activities such as canoeing, caving, diving. (13)

Alpine hiking can be high risk, depending on various factors such as weather conditions, terrain and remoteness of the activity... Below, we selected list of hazards from the Activity Safety Guidelines for Alpine hiking: (13)

Figure 2: The Scottish Framework for Safe Practice in Off-site Visits: Trekking

It is important to note that, the Guideline invite participants also assess numerous points regarding environment ( remoteness, terrain, natural events, hazards from other users, allergic reactions, protecting the environment); hiking activity (walking, site management, river crossing, helicopter transport); activity management (guide knowledge, activity monitoring, communication systems); staff (safety responsibilities and competence requirements, verifying competence); participants (ensuring participants are suited to the activity, informing participants about safety, supervising participants); equipment ( participants and guide equipment, emergency equipment, equipment maintenance); emergency (accessing emergency support, contingencies for limited access to emergency support).

13 <https://supportadventure.nz>  
 14 Support Adventure, ASM Alpine Hiking,  
<https://www.supportadventure.co.nz/assets/Alpine-Hiking-ASG-v1.pdf>





The most likely causes of serious harms are impact injuries from falling, sliding or slipping, avalanches, external impact, drowning and hypothermia.

**The hazards considered most likely to contribute to these are:**

- Unsuitable environmental conditions, e.g. weather or snowpack
- Unsuitable participants-fitness, skills, staff/participant ratios and pre-existing medical conditions
- Unsuitable route selection-terrain hazards, too long, too technical or too exposed
- Unsuitable site choice for an activity or shelter
- Poor guiding decisions, group management, pace setting, situation awareness, supervision or lack of knowledge for the track, route, or site
- Unsuitable staff
- Not being suitably equipped for the terrain, environmental conditions, emergency situations'

Figure 3:Adventure Safety Guideline: Alpine Hiking



How about the activities that are conducted by subcontractors or service providers? How do we identify the risks in their activities, or do we need to identify them? While identifying risks, we advise you to consider all activities whether they are provided by contractors or by your own organization. As an example, if you are working with an outdoor company for rafting tours, it is necessary to know if they have trained staff, if they have necessary permits; or if you are working with a transport provider: are they safe-conscious, do they provide trainings to their drivers or check their background information; last but not least, if you are providing accommodation, do they have necessary emergency plans or fire safety?

Identifying risks at the contractor level can especially be challenging due to the fact that they are often contracted by a different department, nevertheless contracting terms cover lots of issues outside the safety and your suppliers simply might be reluctant to answer some of your questions due to confidentiality (e.g. transport company does not want to share the records of training or background check for drivers...) In these circumstances, we recommend you open the communication channel by letting know your suppliers that you care about safety and try to assess the risks by using the third-party channels (e.g. asking your guide to make a safety tour at the hotel, or check the transport conditions before the tour....)

## Identifying Risks: If you want to go deeper:

In this handbook, we mainly focus on the risk factors related to health and safety, risks that are directed humans. However, as we have noted, risk might vary in terms of reputation and quality of the services, thus if you want to go deeper you can also consider risk points that could damage environment, community life, property, business operations such as:

- **Sustainability:** Adventure travelers highly care about their impact. As a tour operator you might like to consider risk factors in your activities in terms of environmental and social impact. E.g. protection of wild animals, activities that does not allow destruction of wildlife (e.g. turtle feeding)
- **Community:** Social norms can be very important in certain settings, thus while selecting a remote area for camping or hiking, you might also want to consider its impact and perception from the local communities.





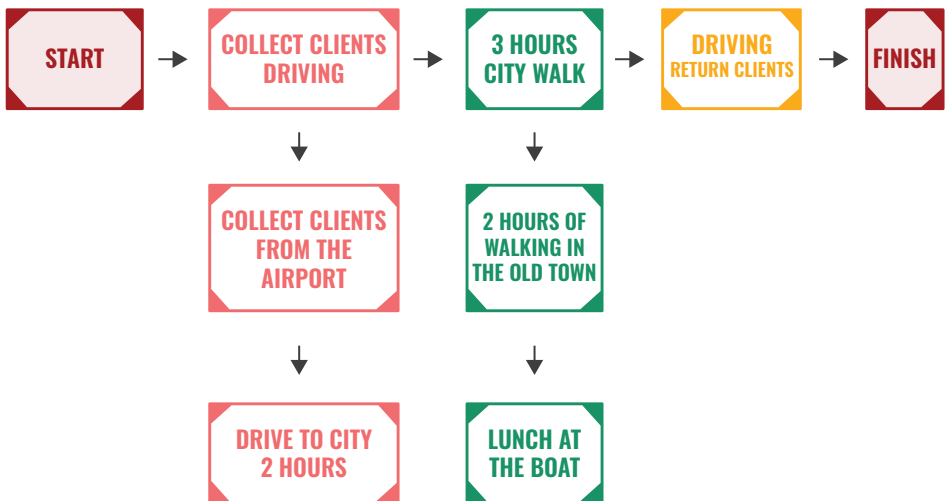
## How do we identify the risks factors?

While going through the examples, you might also ask yourself ‘but how do we identify these risks? Is it a desk-based study that we could do without leaving the office?’. The answer might vary depending factors such as your position, technical expertise, familiarity with tour circumstances and scope of the activities. Some of the risks can be identified from your desk however for an extensive approach you might need to:

- Inspect sites or tours physically
- Study maps and photographs
- Consult with other industry operators, technical experts, sport clubs
- Review standard operating procedures
- Review past accidents and incidents

## Step 2: Risk Analysis

Once you decide on the scope of the activities that will be covered in the risk assessment, you can identify the risks based on these activities. Identification of factors which could lead to accidents, events and their possible consequences is the key. Based on these identified factors you can analyze them according to the likelihood and severity by using a risk matrix tool. Please see the example below for a cultural tour:



## Possible risks can be:

Client forgotten	A client could be left behind at the airport
Bruises	A client gets bruises in the car
Car accident	A car accident could occur
Sunburn	A client can suffer from sunburn
Dehydration	A client could forget to drink water
Fall from the boat	A client could fall while getting in the boat or could fall from the boat
Get lost	A client could get lost and get separated from the group
Allergic reaction	A client could get allergic reaction to the food for lunch

While assessing these risks, we need to consider two points: **likelihood and severity**:

**The seriousness:** what will happen? How bad could the damage be? Could people be injured or die ?

Seriousness	
High	Life-threatening injuries
Medium	Injuries that require a doctor
Low	Small injuries

**The likelihood:** could it really happen? What is the chance/likelihood of it happening?

Likelihood	
High	It happens often
Medium	It happens sometimes
Low	It happens rarely

## Risk Matrix

Seriousness	High	Medium	High	Very serious
	Medium	Medium	Medium	High
	Low	Low	Medium	Medium
		Low	Medium	High
		Likelihood		

**Key:**

Grading (Seriousness + Likelihood)	Category	Explanation
2	Low Risk	Acceptable and managed by routine procedures. Slight chance of the risk occurring with only minimal damage expected (scratches).
3-4	Moderate Risk	Risk examination and management required. A real chance of the risk occurring resulting in injuries ranging from average (first aid will be required) to severe (hospitalization will be required) degree.
5	High Risk	Immediate management required. High to medium likelihood of the risk occurring resulting in critical injuries with the possible threat of long-term disability.
6	Extreme Risk	Unacceptable risk-Avoid. High likelihood of the risk occurring resulting in very serious consequences (life-threatening or life altering injuries and possible death.)

***How do we calculate whether the risk is acceptable or not?***

The formula is: = Seriousness + Likelihood

Example: A client fall from the boat

Seriousness= 2

Likelihood= 2

Seriousness + Likelihood= 4 This risk need to be managed

**In the below table, we identified several risks that might happen in a cultural hiking tour:**

Risk Identified	Seriousness	Likelihood	Risk Acceptable
A tourist can get lost during the tour	1	2	3
A client can fall from the boat	2	2	4
A car accident could occur	3	2	5

### Step 3: Risk evaluation

Based on the risk assessment, you can decide how to prioritize your actions. For high risk and likelihood of events you might prefer to change the company operations and eliminate these activities, or you might take preventative measures to decrease the likelihood or probability by providing procedures, training to the staff or information sessions for tourists.

Below table could give you some guidance on how to take action:

Category	Explanation
Low Risk	Acceptable and managed by routine procedures. Slight chance of the risk occurring with only minimal damage expected (scratches).
Moderate Risk	Risk examination and management required. A real chance of the risk occurring resulting in injuries ranging from average (first aid will be required) to severe (hospitalization will be required) degree.
High Risk	Immediate management required. High to medium likelihood of the risk occurring resulting in critical injuries with the possible threat of long-term disability.
Extreme Risk	Unacceptable risk-Avoid. High likelihood of the risk occurring resulting in very serious consequences (life-threatening or life altering injuries and possible death.)

### Step 4: Risk Treatment

Risk assessment is being done not to avoid all risks and but put necessary measures to minimize the likelihood of the occurrence of the event. Thus, for risks that needs to be managed we need to put suitable actions/measures in place:

#### Measures for preventing and managing risk factors should include

- Written rules and standard operating procedures
- Training in first aid and qualification of upgrading for staff
- Well explained conditions of participation and instructions for tourists
- Development of contingency plans and emergency preparedness plans
- Using updated equipment and monitoring with checklists
- Planning and assessing alternative routes
- Implementing safety measures such as the use of barriers, vests and helmets or cancellation of unsafe activities

## 2.2. STANDARD OPERATING PROCEDURES

SOPs are documented set of instructions that define the rules-control points for staff to complete certain operational tasks with the aim to ensure safety in organization operations and uniformity in its practices.

### Standard operating procedures will help you to

- To decrease accidents and incidents in your tours
- To keep a safe workplace
- To promote your company's reputation
- To achieve a general increase in safety standards in the tourism industry
- For quality standardized services

The framework for standard operating procedures is quite varied. They can be in the form of a checklist, in which responsible person will fill in the information or they can describe the process in a very detailed manner. For practical use, keep the procedures short and simple however clearly identify who is responsible to fill in the document and who will follow up. Procedures are living documents thus can be reviewed and change very often. While creating a procedure; decide the format whether it would be a checklist or provide instructions, or would you prefer to provide additional reference documents in the procedure. How much details will you provide? These questions should be answered while creating the most suitable format for your workplace. The procedure format should be easy to understand and use. It should be noted that there is no one model fit for all. Depending on the operations and needs, the procedure format might be varied. It is advised to look at the examples and set up the most suitable format for your workplace and staff.

Below we provide an example for general SOP for tour guides, you can adapt it to the needs of the tour and identified risks.

SOPs for Guides		
INTERNATIONAL REFERENCE STANDARD	YES/NO	CONTROL MEASURE
<b>Hotels (accommodation)</b>		
Do you have a system in place to check the safety / risk features of the hotel accommodation? (see SOP for accommodation)		
<b>Drivers (vehicles)</b>		
Do you have a system in place to check the safety / risk features of the drivers / vehicles? (see SOP for drivers)		
<b>Camping</b>		
Do you have accurate weather reports before embarking on the camping trip?		
Have you separated toilets, kitchens and sleeping areas while camping?		
Have you ensured that no flammable liquids and gas canisters are left inside of tents?		

Have you established a meeting point in case of emergency?		
Have you established adequate fire prevention procedures?		
Have you communicated that clients should not smoke or use candles, gas or electric heaters in the sleeping tents?		
Have you ensured that camping stools and all relevant camping equipment is in good condition?		
Have you provided hand washing facilities at all campsites?		
Have you ensured that water purification procedures are available (where necessary?)		
<b>Food</b>		
Is purchased food fresh and of high standard?		
Is food kept adequately away from sources of contamination?		
Is food not prepared too far in advance, and is it stored at an adequate (cooling) temperature?		
Is food reheated adequately to ensure all bacteria is killed?		
Is food adequately cooked?		
Is poultry defrosted properly?		
Is there a clear separation between cooked and raw food?		
Are buffets properly monitored to avoid spreading bacteria?		
Is dehydrated food kept in airtight bags or containers?		
Is fresh meat & fish used on day of purchase, if refrigerators is unavailable?		
Are tinned and packet goods stored in a way that prevents damage to the packaging?		
Are use-by dates strictly followed?		
Are fruit and vegetables washed in clean, soapy water, then rinsed in treated water (or chlorine, boiled water etc.)?		
Is there a first-aid kit on hand in the kitchen area?		
Is the cooking environment clean and sterile?		
Do those cooking food maintain adequate levels of hygiene?		
<b>Walking</b>		
Have you checked weather conditions in advance?		
Are you carrying the correct safety equipment including a full first aid kit?		



Have you walked the route before to ensure it is safe to operate it?		
Have you allocated a back marker for the walks?		
Are you carrying effective methods to communicate with emergency services (i.e. SAT phone, mobile phone, radio etc.)?		
Do you have an evacuation plan in place?		
Have you checked that customers have the correct foot ware for the type of walk?		
Are you ensuring that clients take adequate rests during walks?		
Have you communicated that no unplanned walks should take place at night?		
Are you ensuring that rivers with a water level above knee height are not crossed?		
Have you communicated that clients should not approach wild animals?		
If used, have you ensured that porters have adequate clothing, shelter, food, medical care and limited weight loads?		
Are you counting clients throughout the walk?		
Have you briefed customers on schedule for the day, equipment, potential dangers on route, littering etc.?		
Are you aware of common symptoms of Acute Mountain Sickness (AMS) and are they adequately treated - i.e. headaches, nausea, vomiting, fatigue, poor appetite, dizziness, sleep disturbance etc.?		
<b>Swimming / snorkeling</b>		
Have you communicated (and are you monitoring) that clients do not swim alone or after dark?		
Have you briefed clients on the dangers of diving?		
Are you monitoring that tour participants don't swim after consuming alcohol?		
Are you aware of (and have communicated on) currents at swim posts?		
Have you advised clients not to stray too far from the boat/shore?		
Have you ensured that the snorkeling area is free from other hazards, i.e. boats, ski jets etc.?		

Have you adequately checked equipment for quality, safety and customer comfort?		
Have you given a demonstration on how to fit a mask and fins before clients enter the water?		
Have you briefed clients on their breathing techniques, the dangers of the sun whilst snorkeling, and how to use the international distress signal if they get into trouble?		
<b>General Health Risks</b>		
Do you always carry your first aid kit?		
Have you included preventative measures for the most common medical issues on clients' introductory briefing, i.e. around diarrhea, dehydration, heat exhaustion etc.?		

## 2.3. EMERGENCY PREPAREDNESS PLAN AND INCIDENT REPORTING

Emergency Plans are composed of actions that would minimize the harms and losses in case of an emergency. It can be also defined as a management system that aims to meet the needs of affected communities in a timely and effective manner in emergency situations. The emergency plans become active once the emergency occurs and end after the causes of the emergency disappeared. An effective emergency requires to being prepared and coordinated and might necessitates unusual resources. The emergency plans should clearly define the different types of emergency situations and they should be simple and easy to understand and implement.

### How can we prepare an emergency plan:

BEFORE THE EMERGENCY

DURING THE EMERGENCY

AFTER THE EMERGENCY

It is advised to minimize the cases of emergency with preventative measures such as standard operating procedures. Employees needs to be provided with first aid training and completed training for their activities. All materials that has to be used during emergency and numbers to called for emergency cases should be provided to employees before the case of an emergency.

**In the case of an emergency there are 3 factors that needs to be taken into consideration:**

- First aid
- Communication
- Risk assessment and environmental conditions

#### **First aid:**

Based on the degree of the injury; tour responsible need to decide on the first aid model and transfer the victim to nearest health center and keep calm other tour participants.

#### **Communication:**

Tour responsible has to inform tour operator, evacuation team. Emergency teams need to be informed about the condition of the victim, materials that are needed, conditions of the other tour participants.

#### **Risk assessment and environmental conditions:**

Preventive measures should be taken for ongoing risks and possible accidents.



## Incident Reporting

**Incident reports should at least cover the information below:**

- Information about the victim
- Decisions of the victim (whether or not accept the first aid, decisions on transfer model)
- Reason of the incident
- How the incident occurred
- Environmental details
- Which organizations are being informed about the incident



## INCIDENT REPORT EXAMPLE

### Part 1: General Information

Reported By			
Name of Guide			
Name of Tour			
Seriousness of Incident	<input type="checkbox"/> Accident	<input type="checkbox"/> Near Accident	<input type="checkbox"/> Other .....
Date & Time	Date: .....	App. Time of Incident: .....	
Place of Incident:			
Description of Incident			
Actions taken by guides			

### Part 2: Client Information (one form per client directly involved in the incident)

Name of client		
E-mail		
Description of Injury		
Was the client transferred to hospital?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Client refused hospital treatment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Transported by ambulance?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Any other type of transport?		
Were the police called to the scene?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rescue team involved?		

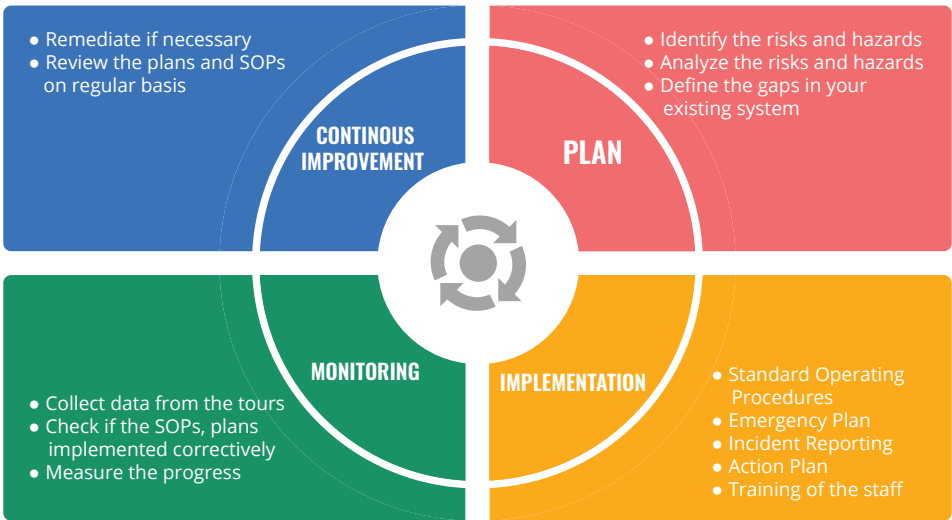
### Part 3: Other Clients

Were any other group members in need of (trauma) support?	<input type="checkbox"/> Yes	<input type="checkbox"/> No		
Was (trauma) support offered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Client declined help	
Other actions taken concerning client				
Witness to accident	<b>Name</b>	<b>Phone</b>	<b>E-mail</b>	<b>Nationality</b>

## 2.4. ACTION AND MONITORING PLAN

Action and Monitoring Plan is a set of activities that aim to improve safety conditions in its operational activities. The AMP outlines the activities that need to be performed to reach its overall strategy and objective for safety. As a minimum, the APM defines tasks (what will be done), responsible (who will do it), duration-timeline (when it will be done) and monitoring methods (how it will be followed up).

The main aim of the RSMS is to minimize the damage or likelihood of the occurrence of accidents with necessary measures. Thus, without an action plan, risk assessment would be pointless. For continuous improvement, we need to collect data, review the system, follow up measures for ensure the efficiency.



As in many of the management process, RSMS also necessitates leadership: a responsible who that demonstrate commitment and lead the process and strategy that clearly defines the expected results and vision.

**While deciding on the leadership and strategy following questions can help you to manage the process:**

- Who will manage, lead and follow up the process?
- Who will be responsible for different activities? (on-site and document based)
- What would be the strategy? What is the vision of this process? (providing quality safe services, being pioneer in the sector on safety, minimize the accidents...)

If you set target related to your strategy you can also measure your performance over time and progress you have made. While conducting the monitoring following tips could be useful:

- Review the risk assessment, procedures frequently. Risk might change over the time or new activities could be added into your program, it is important to keep the documents up to date
  - Monitor the incident records, accidents, they could help you to improve procedures, understand the shortcomings
  - Provide refreshment trainings to your staff, guides, suppliers

# Action and Monitoring Plan by GIZ

**Action and Monitoring Plan is a self-assessment tool developed for the tour operators:**

**The Plan is composed of 3 main parts:**



## Profile of the Company

In the profile of the company section, you need to provide various information regarding the company structure such as main activities, services, number of staff and guides. This information is needed to better understand the profile and related needs.

## Develop A Safety Plan

This section allows you to assess your organizations safety system and identify the missing points. A basic safety system requires a risk assessment, standard operating procedures, emergency preparedness, incident reporting and client screening. Do you assess all the risks in these areas? Do you have the standard operating procedures to address these issues? Do you have record keeping system with incident logs? By answering these questions, you will discover the gaps in your system.

## Implement A Safety Plan

Implementation part covers main elements such as developing corrective actions, monitoring and planning for continuous improvement. The main aim of a management system is to prevent the occurrence of the incidents in the first place, however in case they happen you need to have proper actions to avoid that it happens again. In this section, you will answer the questions such as: Do you implement corrective actions for issues you have identified in risk assessment or for accidents? Do your staff have proper training and knowledge on the procedures? Do you monitor how your procedures are implemented?...

**The Action and Monitoring Plan can help you to see the gaps in your system, put on measures and follow them.**

## 2.5. HOW TO SET UP RISK AND SAFETY MANAGEMENT SYSTEM: • STEPS

In the previous sections, we examine the main elements of the RSMS. Below, the main 9 steps of the system is presented with examples and useful tools.



### 1 - Leadership & Strategy



### 2 - Analyze Risk and Hazards



### 3 - Define SOPs



### 4 - Define Emergency Plan



### 5 - Prepare Incident Reporting & Insurance



### 6 - Develop Action Plan with Targets



### 7 - Train your Staff & Suppliers



### 8 - Monitor Your Safety Measures



### 9 - Strive for Continuous Improvement

#### 1. Leadership and Strategy:

While developing a new system, it is important that the process will get across all team members including your service providers and their staff. Demonstrating a leadership and setting a responsible is first stage in this process. Setting a strategy demonstrate if your organization already consider the risk and safety as part of your overall quality mission and vision. The organization do not need to develop a new strategy for risk and safety management in case your overall strategy is also covering safety/security of the customers. However, responsible(s) for this task should be clearly defined via procedure or job description.

#### 2. Analyze risk and hazards:

As we explained in the previous section, risk assessment requires risk identification, analysis and evaluation.

#### 3. Define SOPs:

Based on the risk assessment define necessary SOPs to take preventative measures for minimizing the likelihood of occurrence of incidents and damage

#### 4. Define emergency plan

#### 5. Prepare incident reporting & insurance

#### 6. Develop action plan with targets

#### 7. Train your staff and suppliers:

Your staff and supplier need to be equipped with necessary skills and knowledge to prevent and manage risks. For staff and supplier training you need to analyze the needs (e.g. what are the main skills needed for the identified risks) and key personnel: (who will be provided with training). It is important to make aware all personnel and suppliers about risk and safety procedures. Subject specific training can be organized for relevant staff (e.g. advanced driving techniques for drivers, first aid trainings for guides)

#### 8. Monitor your safety measures

#### 9. Strive for continuous improvement





## ANNEX 1: Definitions

For those who are not familiar with standard and quality management terminology might sound too technical however, most of the tools have practical objectives: such as policies are for communicating for values to your staff, business partners and customers; procedures are for unified practice of services and actions plan are for improving services. Below we provide definitions for the terms that you often hear throughout this document:

**Risk:** A risk is the likelihood that a person(s) may be harmed, damaged or suffer adverse health effects if exposed to a hazard. Within the concept of this project, risk is only evaluated in the context of health and safety of the tourists/clients and staff.

**Acceptable Risk:** potential hazards, which are expected and accepted as part of the basic itinerary of a specific tour. As a rule, these risks have been previously identified, assessed and determined to be acceptable. Acceptable risks are managed or controlled through specific measures.

**Risk Assessment:** is the process in which the risk of a hazard occurring is evaluated and the availability and efficiency of control measures are considered. Assessed risks are defined as acceptable or not for specific types of tours.

Risk assessment includes:

- identifying risk factors/hazards
- assessment of the likelihood that the hazard will occur and the seriousness of the consequences of such an event
- evaluation of whether the risk is within acceptable limits set by the operator, national laws, tourists and/or international standards

**Risk and Safety Management System:** is a management system that focuses on ensuring safety of tourists/clients and staff by efficiently managing operational risks through leadership commitment, clearly defined responsibilities, roles, processes and procedures (e.g. SOPs, EPP, Incident Reporting), building capacity among staff with training; and monitoring of practices and results with objectives and targets.

**Risk Matrix:** is a method to assess whether a risk is acceptable or need to be managed-avoided based on how likely it is to occur and the seriousness of the consequences.

**Hazard:** Potential source of harm that may imperil the health and safety of people. Hazards can be risk factors and may come from any kind of activity from acts of nature, humans or objects.

**Accident:** an unintended and unpredictable event resulting in death, disease, injury or other damage.

**Incident:** is an event leading to an accident or having the potential to lead to an accident.

Almost accident (near miss or near accident): an incident in which no personal injury was sustained but where given a slight in time or position damage or injury easily have occurred.

**Standard Operating Procedure:** are documented set of instructions that define the rules-control points for staff to complete certain operational tasks with the aim to ensure safety in organization operations and uniformity in its practices.

**Action and Monitoring Plan:** A set of activities that aim to improve safety conditions in its operational activities. The AMP outlines the activities that need to be performed to reach its overall strategy and objective for safety. As a minimum, the APM defines tasks (what will be done), responsible (who will do it), duration-timeline (when it will be done) and monitoring methods (how it will be followed up).

**Emergency Preparedness Plan:** A set of instructions/actions used by staff/tour personnel to efficiently manage and minimize the damage in case of emergencies and accidents. In the context of this project we use EPP as a synonym of Emergency Plans that also covers issues by contingency plans.

**Incident Report:** a reporting tool for recording the almost accidents, incidents and accidents experienced by staff, supplier staff or tourists during the organizational operations.

**Food Safety:** describes all processes necessary to handle, prepare and store food in ways that prevent food-borne illnesses resulting from contaminated food, pathogenic bacteria, viruses, or parasites.

**Fire Safety:** fire safety is a set of practices intended to reduce the destruction caused by fire and includes measures that are intended to prevent ignition and measures that limit the development and effects of a fire after it started.



# RISK AND SAFETY MANAGEMENT SKILL BUILDING IN ADVENTURE TOURISM DESTINATIONS

## INTRODUCTION COURSE



# EXPLORE!