

INTERNATIONAL GUIDEBOOK FOR THE DEVELOPMENT OF HIKING

Territory & Trails



The Planet of Hiking

PART 1

March 2021



"Thanks to all those who have contributed to giving substance and meaning to this project"



Operator delegated by IMTA

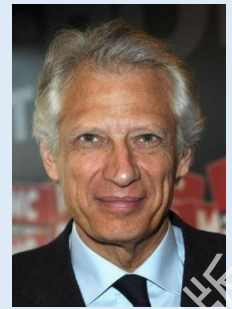
March 2021

« Building sustainable tourism... »

Dominique de VILLEPIN

President of IMTA

Former Prime Minister of France



We engaged in this study, at the very heart of the global health crisis of 2020 because, the impact of Covid 19 on global tourism has been painful, unprecedented and without comparison. Apart from the economic urgency in this sector, the shock suffered must become a turning point for thinking about the future of sustainable tourism in the light of the current economic, societal, social, and environmental concerns.

This sector of activities must be rebuilt in an equitable manner with a controlled impact on the environment and the climate. And what better territory than the mountain to favor this commitment to sustainable tourism practices like outdoor sports such as hiking, and thus to become a laboratory of innovation combining development, responsibility, and respect?

The covid 19 crisis is also a clear example demonstrating that "tourism" must never lead to the abandonment of local trades, which are and remain a vital necessity. Indeed, the tourism industry is easily negatively impacted by aggressive competition as well as unforeseen changes in trends and economic, ecological, political, health crises. A tourist economy will always be more efficient and more sustainable if relies on local tourism and promotes a diversity of skills in local tactors. For example, the farmer and the small trader can also become hiking guides, the breeder may rent his donkeys or pack horses for family walks, and the peasant can sell his local products to passing visitors and offer in his farm-lodge accommodation and meals. 15 years ago, when I chaired the National Mountain Council in France, I noticed that this model generated almost a quarter of the known additional income in rural communities.

The popular practices of walking, hiking and running - my passion - have become societal phenomena spreading to cities where urban planning models that these gentle and motorless journeys are flourishing. A new ethic for living, a new outlook on the world within a humanist and responsible panorama. This is a revolution that we demonstrate in our daily habits and actions.

This momentum is firmly in line with the United Nations goals and carries within it the spirit of sustainable development, fueled by the multiplication of actions in the field; sometimes modest but always constructive.

The development of hiking trails, along with the relevant services, which we praise here, are all beneficial initiatives for the territories and which can benefit our troubled planet.

Dominique de Villepin



« Interconnecting and opening territories... »

HE Yafei

General Secretary of IMTA

Former Deputy Minister of Foreign Affairs of China

Former Ambassador of China to the United Nations



This « Hiking Development Guide: Territories and Trails » is intended for communities in China and elsewhere. Practical and comprehensive, it is an essential tool and offers strategic and technical assistance to those developing hiking projects, the most popular touristic and sports activity in the world.

Since the beginning of time, roads and footpaths have brought people together, crossing rivers and mountains, sharing knowledge and goods, and animating the regions they traverse. IMTA intends to carry forward this tradition.

I am fascinated by the idea that networks of paths and hiking trails are developing in my country and within the framework of international cooperation. This will contribute to the search for new, more eco-responsible living models particularly needed in the post-Covid environment. The popular local trails could be connected, forming a vast provincial and national - even trans-national – mosaic of walking trails such as that already exists on other continents.

As much as a philosophy of life, there is a promise of a tourism of experiences, of discovering the treasures that nature offers to humanity, as well as fruitful exchanges with people from here and elsewhere. All this in the service of 'a world on foot, open and interconnected in nature.

It will be interconnected as are the many mule paths in the mountain ranges of western China, territories committed to opening, to prosperity, and to socio-economic progress. Mountain tourism is a pillar of this future. Hiking is another.

It will be open as the « Silk Roads ». These routes, both old and new, in crossing continents have always fostered exchanges, both commercial and cultural, between people and ethnic groups.

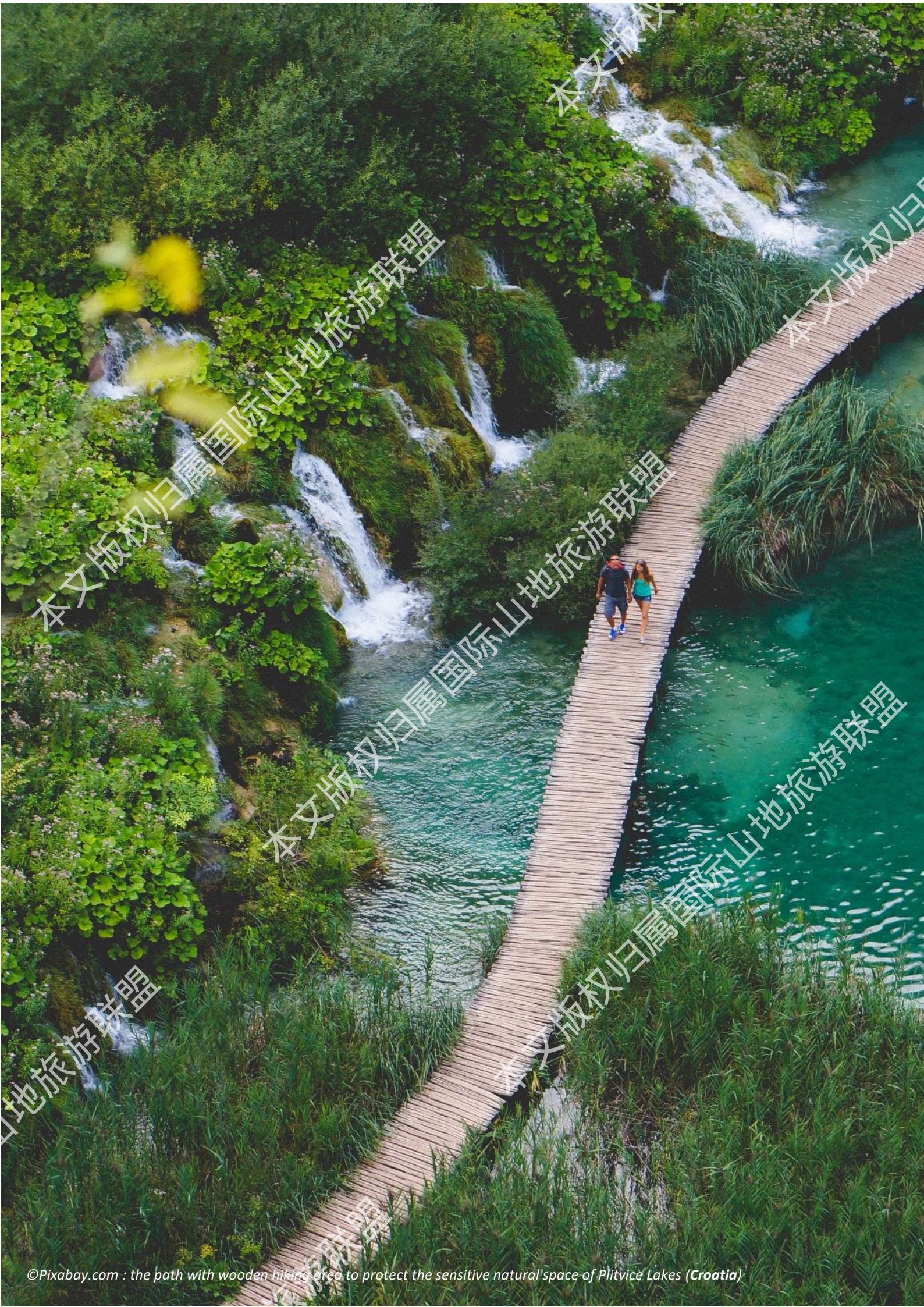
The vision of a new development paradigm promoted by President Xi Jinping is enshrined herein; « *to build an open society, moderately prosperous in all respects, to share a common destiny for humanity.* » He was an enthusiastic hiker, formerly President of a Fujian Province hiking club.

The concept of this study is a range of hiking « plus » projects; hiking projects that combine agriculture, ecology, health, sport, art, landscapes, introspection, and spirituality. This array of experiences is the result of considerable creativity and innovation to the benefit of both tourists and local communities.

This IMTA « guide » is intended to contribute to the future development of the modern world in its continuing search of meaning, values, and peace.

何亚非





« Nature-based solutions to social and economic development... »

ZHANG Xinsheng

President of the International Union for Conservation of Nature (IUCN)
Former Chairman of UNESCO Executive Board and World Heritage Committee
Former Vice Minister of Education of China



In response to the invitation from my long-time friend Francesco Frangialli (former Secretary-General of the World Tourism Organization, UNWTO), I take note of, and commend the publication of this special book devoted to the development of hiking under the auspices of the International Mountain Tourism Alliance (IMTA).

The International Union for Conservation of Nature, which I have the honor to preside, has been spearheading the international action for the conservation of nature and biodiversity. In this regard, three key principles in the areas of biodiversity conservation, sustainable consumption and equitable use of resources were adopted at the Rio Earth Summit in 1992 within the framework of the United Nations. The International Year of Ecotourism and the World Summit organized by UNWTO in Quebec in 2002 have given rise to the same principles for the tourism sector, of which the development of hiking is an integral part.

We now have recognized how the multi-millennial process of development of our species has disrupted the natural order of the environment. Human activities, in the headlong rush, carry a heavy share of the responsibility. Tourism, in its role as a pillar of global economic growth before the COVID-19 health crisis, has brought countless opportunities but also risks for the environment. Management concepts should be reviewed to limit their impacts.

2020 marked the 50th anniversary of "Earth Day" and the start of a critical decade in the fight to save the health of our planet. Facing the major challenges of the 21st century, global warming, water scarcity, pollution and the loss of biodiversity, a considerable amount of work needs to be done ahead of us. Solving them requires the active participation of all, and all initiatives contributing to the overall strategy towards an eco-civilization should be encouraged and supported.

Universally promoting the good practices of soft and consensual tourism is one of these initiatives. Pedestrian activities of leisure nature will provide the chance to gently enhance the living natural heritage and will pursue tourist and sporting choices rather than the traditional concepts which concentrate masses and commodification with their heavy consequences. They embody local tourism, a diffusion of profitability, more equity and more moderation: prerequisites for the realization of the vision of a healthier, more balanced and happier world.

In this context, I sincerely congratulate IMTA for this initiative aimed at developing soft tourism and hiking with eco-responsible measures, which certainly will contribute to more public awareness of the imperative need to live harmoniously with our environment and its biodiversity. It is my sincere hope that this type of slow-paced travelling will not only help lift the mind of tourists but will also enable every

章新生 X. Zhang

They said...



HIKING, THE SOUL OF RURALITY

«The practice of hiking is a great showcase for our countryside and our mountains. This is also the case for all sports, cultural and outdoor tourism practices that the public authorities support in the regions. They enhance our terroirs while associating their inhabitants. I am convinced that they participate in creating poles of attraction that foster social ties and exchange»

Joël GIRAUD

Secretary of State in charge of Rurality, **France**



CULTURE AT THE TIP OF THE FOOT

«Hiking, a cultural enrichment that the men of today cannot shy away from. Inca culture and Andean nature give our hiking trails this unique flavor. To naturally welcoming native villagers, they offer opportunities to open up to people from elsewhere, to offer services to guide them, accommodate them and share their crafts and their traditions. Heritage is thus the wealth to be developed and preserved in order to pass it on to future generations: a model that we like to promote.

Rogers Martin VALENCIA ESPINOZA

Former Minister of Tourism and Former Minister of Culture, **Peru**



TOURISM, AN ADDED VALUE

«Hiking has acquired the signs of noblesse by increasingly giving pride of place to touristic activities. A “visa” of discovery for practitioners, economic benefits for communities, lucrative activities for tourist industries: tour operators, guides, accommodation providers, restaurateurs, traders, artisans, cultural leaders... A vein to be developed! »

Francesco FRANGGIALI

Former General secretary of the World Tourism Organization, **UNWTO**



THE ECONOMY OF HIKING

«Hiking is a major driver of economic development, provided it is operated in an environmentally responsible manner. In my country, tourists can hike in the majestic Himalayan range with minimum discomfort and maximum pleasure. This mountain travel market is beneficial to all stakeholders: institutions, public and private sectors, local people. For almost 70 years, trekking has participated in transforming the territory and society of Nepal»

Achyut GURAGAIN

President of Nepal Association of Tour & Travel Agents, **Nepal**





THE WEALTH OF VOLUNTEERING

«No developed society in our 21st century can deprive itself of the commitment, availability and skills of the volunteer. This creates and maintains the hiking paths. They bring them to life, carried by their unfailing passion. It is a vocation they demonstrate profusely, accompanied by a feeling of utility. Volunteering is and will remain part of any ambitious policy for the development of hiking activity»

Boris MICIC

President of the European Ramblers Association, **Europa**



HIKING: A-LA-CARTE SPORT

«The multiple pedestrian practices outside the stadium allow us to refer to the Olympic past: 1896 the "marathon" in Athens. 1908 the "athletic walk" in London. And tomorrow, the trail running will be in Olympic demonstration event. This is promising as well for leisure hiking, serving as a link between sports and tourism as it aspires to enter this world of sport. This is what always is, our benchmark for the future»

Nima TSERING

Member of Olympic Committee of **China**.

Former Honor President of China Tibet Mountain Association



EDUCATION, AN ENTIRE PART OF HIKING

«Sustainable development « is based on a new vision of education, capable of making individuals of all ages sufficiently responsible, to be able to assume a viable and pleasant future for all of us and for future generations. » The practice of hiking is inevitably part of this ethical and universal concept»

Professor Michel RICARD

Head for the Chair of Education, Training and Research
for Sustainable Development of **UNESCO**

WHEN WALKING RHYME WITH HEALTH

«Walking is the best medicine for man »

HIPPOCRATE,

Philosopher and father of medicine in ancient Greece
5th century BC



« Huangshan Mountain: experience nature in more diverse ways »

SUN Yong

Deputy Secretary of the CPC Huangshan Municipal Committee (China),
Mayor of the People's Government of Huangshan City
Director of the Management Committee of Huangshan Mountain Scenic Area



Inner peace has been a need of urban people. Of course, developing ecotourism and hiking products in Huangshan Mountain should be in line with national reality. Corresponding regulations should also be formulated to ensure strict protection measures. China has a big population, and of course, a huge number of tourists, so without strict protection measures, ecological damage would be an inevitable result. Therefore, it will remain a focus of our attention.

I would like to thank the International Mountain Tourism Alliance for all the innovative efforts made to promote the green and eco-friendly tourism way of "hiking". Either for Mother Nature or mountain tourism, it is a valuable creation. Huangshan Mountain feels very much honored to contribute to this field.

A handwritten signature in black ink, consisting of the Chinese characters '孙勇' (SUN Yong).





« Chamonix, a melting pot of innovation and experience »

Eric FOURNIER

Mayor of the municipality of Chamonix Mont-Blanc (France)



Throughout the valley of Chamonix, the history of men, its paths and the professions of the mountains are forever etched in time. Since the 18th century, the mule tracks have brought life and light to our valley. People from England, Russia and more distant countries came to breathe the pure air of our mountains, and to see for themselves the glaciers descending from Mount Blanc, 4807 meters high.

The first company of mountain guides was founded in 1821; its objective is to standardize a new profession and to responsibly open a new territory of nature, sport and tourism. A few decades later, Chamonix became host to the French National School of Mountain Sports, *l'Ecole nationale des sports de montagne*. Since this time, the school has trained and issued diplomas for professional mountain guides. We wish to share our pride as mountain people, our attitude, our skills and our innovations with the rest of the world.

Chamonix is a start and end point for network of cross-border hiking and walking trails, linking together villages and mountain resorts in the entire Mount Blanc Mountain range. Locals and visitors who walk this myriad of hiking trails find both pleasure and joy, as I myself have done with great passion. Mountain walking is an essential part of the activities available to tourist who come to freely enjoy and experience this landscape.

The trails are fully supported by the entire community of the region, including their maintenance, their creation, their promotion, and the services needed to welcome and host visitors. The global reference for competitive trailing running found here, the UTMB (Ultra trail du Tour de Mont Blanc). Its route, one of the most frequented in the world, traverses the 'Roof of Europe' through the mountains of France, Italy, and Switzerland, and reinforces the character of the Chamonix Valley, the Mount Blanc massif and the entire region.

Chamonix is keen to maintain a balance between local economic development and the preservation of its treasured mountain spaces, and remains committed to ensuring full and free access, regardless of the season, to this common global good.

As such, this book by the ITMA, reflects our passions and commitments.

A handwritten signature in black ink, reading "E. Fournier".

Author:
Serge KOENIG 高宁

Former Mountain Attaché to the French Ambassador to China
Former "Outdoor sports and sustainable development" advisor to the Minister of Sports
Former ENSA international teacher-guide, High Mountain guide at the Compagnie de Chamonix
Guest lecturer about tourism & sport at the University of Savoie Mont-Blanc

Five questions for the author by Maurice BRUZEK

Journalist, Former President of the outdoor sports council of the French Olympic Committee

MB: You agreed to take the lead in conceiving and writing this study, why?

Serge Koenig: *"It's a great social project that I wanted to be part of. It makes sense. It has a human and territory dimension. It affects many people, whatever the country, the social environment. My background in sport with the great outdoors, in mountains, and in China naturally led me there. And I put my heart into it."*

MB: What are the advantages for China and its territories?

SK: *"Hiking is universal and this report can be useful everywhere on the planet. But it is in China that the development of tourism and outdoor sports could become most dynamic. Government policies are very proactive. Growth is driven by domestic consumption, including services to support tourism and sports. This growth is based on a huge middle class. In 2022 there will be the Winter Olympics which will stimulate the outdoor sports sector in general, and the culture of mountain tourism in particular. This is a process which must be inspired by questions of environmental protection and which can benefit experiences elsewhere."*

MB: What are the main ideas of the study?

SK: *"We have opted for two complementary illustrated reports. The first is a broad range of existing hiking in the world with concrete examples. And the second provides guidance for those who are carrying out trail projects: municipalities, tourist offices, associations, operators of hiking services. This study is intended to be a source of information and advice to help realize projects and find balanced management path. Each chapter deals with a topic and can be read independently from the rest. The subject is vast and varied. Finally, this IMTA report can be the first in a series to promote other activities, such as cycling, skiing, and climbing."*

MB: This study should generate projects, what means should be considered?

SK: *"In principle, you don't need heavy financial investments or major structural improvements to create and manage trails. However, specific knowledge is required, in particular regarding environmental and safety issues. One of the objectives of this book is to create alternatives for ecological, ethical and fair tourism."*

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LOGOS OF SOME CONTRIBUTING COMMUNITIES AND ASSOCIATIONS IN THE CONTENT OF THE REPORT





SUMMARY

Part 1: The Planet of Hiking



SCOPE OF THE STUDY

1

With the emergence and development of leisure and consumer society, outdoor excursion for fun and sports cover many disciplines.

The most popular types of outdoor excursion are walking, hiking and trekking. It is generally practiced on recreational and tourist trails, providing both relaxation and sports activities for local communities and consumption for tourists.

The playful and sporty evolution of this age-old activity has forced countries to come up with specific plans for land use and rural, economic, and tourism revitalization, as well as to answer questions related to education, social cohesion, environmental protection, safety, and conflicts of rights of use, as well as on legal aspects.

The purpose of this report is to give an international perspective and to provide practical advice on trail creation and initiation projects, whilst striving for a balance between development and protection of the local environment.

As such, the focus of this report is hiking trails and related topics.

Hiking on trails
and tracks

Scope of the study



Trail running



Fast hiking



Via ferrata



Other forms of
outdoor excursion



Not covered
in the study

Riding excursion with
an animal



Mechanized
outdoor excursion



Motorized outdoor
excursion



The types of “soft” outdoor excursion on trails particularly hiking and horse riding, embody the spirit of nature and easily coexist with each other, being practiced in the same spaces.

When the trails are used simultaneously by hikers and practitioners of other faster modes of travel such as trail running or mountain biking, tensions may appear. Indeed, some can annoy and endanger the other user. Regarding motorized leisure, they are noisy, polluting, potentially dangerous and they damage the paths. For these reasons, it is recommended that they be carried out in a dedicated area separated from other forms of activities, far from inhabited areas, and outside of protected zones.



Other forms of outdoor excursion in different environments

Other types of “soft” outdoor excursion are practiced in natural environments off trails and off paths. It is for example snowshoeing, ski touring, nautical or underwater excursion, glacier hiking, underground hikes, etc. They are not included in the study.



AN ANCIENT AND UNIVERSALLY PRACTICE

2



©OT Chamonix: Hiking in the past



Hiking is suitable for everyone, men, women, young and old, beyond all social frontiers. It has always carried the spirit of bringing together diverse and varied populations and cultures. Hiking offers this perspective as **Europe** in particular has known it, when **Germany, France, Switzerland, Austria, Italy, Spain, Great Britain** and other countries developed inter-territory and cross-border paths and trails.

As for **China**, which is involved in the production of this “international guide” to develop hiking, its geographical landscape and climate conditions lend themselves to all forms of outdoor excursion. Hiking is rooted in its traditions, in the mountains in particular. Refuge of freshness during the great summer heat in the plains, emblematic, cultivated, contemplated and prayed for since the dawn of time, the mountain has always inspired hikers, painters and poets. In recent years, a new approach to nature with mass consumption of sporting leisure has begun to feed new economies geared towards tourism. this report is part of this trend.

It is common knowledge that walking has been practiced on the five continents since the dawn of time as a means of transportation. Initially, it was associated with poverty and vagrancy, or with religious pilgrimage. But in as early 18th century the activity in the modern recreational hiking appeared in the **West**, as hikers, painters, philosophers and poets wanted to get closer to nature in search of inspiration. In the 19th century, the first hiking clubs emerged, and the first projects aimed at structuring hiking were developed, marking out a large number of tourists hiking trails. These activities were significantly expanded in the 20th century with the popularization of tourism and recreational activities favored by the arrival and overall introduction of paid vacations, along with the development of cars and trains.

Hiking is now a major asset for tourism, land and usage planning, knowledge of cultures, and relationship with nature. Hiking has even become a public health issue in a world where more and more women and men live and work in cities under stressing condition, city dwellers aspire to "Consummate Better and Live Better". Hiking lets people enjoy healthier lifestyles while it also the perfect way to rediscover nature and searching for our identity.

Hiking has also become the object of numerous local and tourist demands for local authorities as well as tourism industries. They are adopting this practice as a vector of economic development, environmental education, regional coherence and development, creating a link between urban and rural areas, setting up policies in favor of sports and health, all of which presents challenges for the future.

Hiking is village...

It is province...

It is also country...

It is even continent and world.

This activity, the simplest that is, which consists of putting one foot in front of the other, is universality.





A MAJOR ASSET FOR THE TERRITORY AND THE TOURISM

3

Hiking activities play a significant and inclusive role in the economic and social relevance of tourism and can bring profits to an entire region.

It is a virtuous alternative model to mass tourism, which has lately been increasingly questioned for its negative impact on the environment. In particular, hiking is an effective tool for distributing visitor flows that also generates economic spin-offs in terms of time

CHAPTER SUMMARY

- 3.1 Nature: a growing demand
- 3.2 How many citizens hike in their country?
- 3.3 How many tourists hike during their vacations?
- 3.4 An opportunity market for tour operators and professionals
- 3.5 Benefits in European countries
- 3.6 Benefits in North American countries
- 3.7 The Chinese potential
- 3.8 Hiking Gears & Equipment Market
- 3.9 Hiking tomorrow?



3.1- Nature: a growing demand

In today's world, characterized by globalization and digitalization, 56% of all humans live in cities where they face increased urban constraints that push to speed and performance. Therefore, it is not surprising that the slow pace of nature has become a strong value and a highly sought-after need.

72% of people in Switzerland, 62% in Germany and, 60% in France consider getting out in nature the most effective way to recharge their batteries. It's not just being in nature that gets them re-energized, but above all, it's the physical activity and the fact that they can escape the growing pressures of their daily routines. Hiking is by far the most popular outdoor activity during downtime. The number of hikers growing steadily.

In this reconnection to nature, some countries with a thriving hiking culture have made hiking a part of their marketing to attract tourists.

(Sources: World Bank from the Sotomo Research Institute)





3.2- How many citizens hike in their country?

Globally, in countries with a high "Human Development Index" (an indicator combining health, longevity, education levels, living standards including GDP per capita), its people are also more likely to engage in leisure such as hiking for recreational and sport purposes.

Here are some examples and statistics for developed countries:



Switzerland - Europe

- 44% of the population in Switzerland hike
- This represents approximately 2.7 million of the nation's population

(Source: Suisse Rando)



Germany - Europe

- 47% of the population over the age of 14 go hiking regularly or on occasion
- This represents approximately 38.84 million citizens

(Source: Statista, 2019 Wanderer in Deutschland nach alter)



France - Europe

- 25% of the population hike, of which 1 in 3 hike regularly
- This represents approximately 16 to 18 million French citizens

(Source: The National Resource Center for Nature Sports of the French Ministry of Sports)



Great Britain - Europe

- 63% of the adult population hike for leisure at least once a year
- This represents approximately 35 million citizens

(Source: ramblers.org.uk)



Australia - Oceania

- 27.3% of Australians over the age of 14 report that they hike regularly or on occasion
- This represents more than 5.3 million Australians

(Source: Roy Morgan Research)



Canada - North America

- 85% of the population walks for leisure and recreational purposes
- This represents approximately 32 million people

(Source: CFLRI Trail Monitor, published by Go for Green and Canadian encyclopedia)



USA - North America

- 15% of the population hikes
- This represents approximately 47.86 million of its citizens

(Source: Statista of Hiking Participants in the US for 2016 - 2018)



Japan - Asia

- 8% of the population hike and 25.5% enjoy going for walks
- This accounts for 10 million and 32 million, respectively

(Source: Statista and Stats - Japan 2018)



Peru - South America

- 20% of the population use walking as a mean of travel in their daily life, this represents 6 million individuals.
- 3.5% of the population hike for pleasure, representing 1 million individuals.
- On top of this, millions of Peruvians participate in pilgrim walks.

(Source: Minister of Tourism of Peru)

The significant participation by local communities is spread over a wide range of trail types and responds to the wide range of aspirations of users. All participating sectors of the trail activity in these countries, (government administrators, district administrators, associations, federations, private operators etc.) share the vision that this is a huge market that will evolve and scale exponentially.

EXAMPLES OF LOCAL TRAIL USE IN NEW YORK



NEW YORK TRAILS (USA)

The New York State Trails Council was created in 1981 to ensure citizens participate trails planning and management. Comprised of a group, the council estimated in 2019 that the neighborhood trail activities would account for more than 180 million usage days per year by local residents.



To the frequentation of the trails by local users, we must add the hiking tourists from other regions and other countries.

In **Switzerland**, for example, 46.7% of its 300,000 foreign tourists who visit the country each year report hiking during their stay: they are primarily from Germany, Belgium, France and the Netherlands, as well as China, Korea, and Japan.

(Source: Suisse Rando 2018)



3.3- How many tourists hike during their vacations?

As we have just seen, walking and hiking is one of the most popular recreational activities in many countries, and is also a driver for local tourism. These practices are also very popular among foreign visitors who can enjoy the pleasures of hiking in a variety of options from short, easy walks to more strenuous, multi-day hikes.

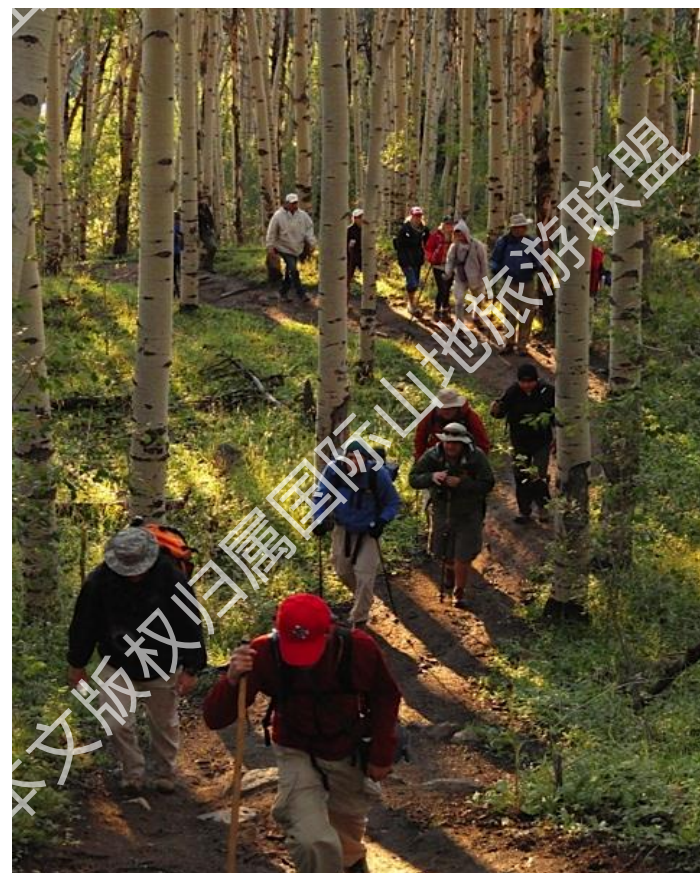
New Zealand is a prime example. The country relies heavily on two marketing initiatives to develop its domestic and international hiking tourism.






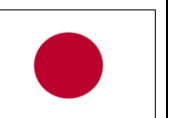
- Its scenery: in particular, three large natural reserves that are recognized as world heritage sites.
-
- Its hikes: 14,000 km of trails, 9 major multi-day backpackers hiking routes on north and the South Island, plus a host of shorter hiking options, daily to a few hours.

According to the statistics of Tourism New Zealand:

- 73% of overseas holidaymakers go walking or hiking;
- 14% say walking and hiking was the main reason for choosing New Zealand as their destination;
- Those who travel to New Zealand for walks and hikes tend to stay longer and spend more than other visitors: approximately US\$3000 compared to US\$2800. On average, hikers stay for 19 days compared to 16 days for non-hikers.
- Most international visitors participate in short hikes averaging 3 hours;

Walking is the most popular activity for tourists visiting New Zealand, and long walks are particularly popular among German and British visitors.



Nationality						
% of visitors who hike and walk	29%	15%	11%	7%	6%	3%
% by type of hike						
Short walks spanning over a few hours	59%	52%	67%	71%	73%	43%
Day hike or multi-day treks	17%	14%	27%	34%	34%	18%

(Source: Tourism New Zealand, May 27, 2020)

Active people who are aged 45 and over, particularly from **Australia, the US, the UK and Germany** are the primary targets for the New Zealand hiking tourism market. These tourists consider nature and scenic attractions to be the key reason for their trip and a proportion of these are experienced hikers.

A second target group is tourists from **Australia, the US, UK, Germany, Japan and China**, who may hike during their stay. Walking may not be their main leisure activity, but they are open to the idea of walking short trails or hiking longer trails if it means that they can have a rewarding experience, if they can fit it into their holiday program, and if they have the capability and motivation to drive them.

What they have in common is that they want to be immersed in nature, and they want to do it at their own pace by enjoying:

- The easy access to nature, its wildlife and landscape;
- The variety of trails and scenery;
- Local hospitality and exchanges with local communities, as well as the expertise of local guides who can accompany them.

A key to the national success of hiking tourism is the close partnership between the Department of Conservation (DoC) and Tourism New Zealand services. Together, they promote the outdoor market in a structured way according to prioritized targets.

In addition to the maintenance and development of trail networks and arranging related services, their marketing strategy focus to communicate on the trails that collect the best comments on social networks and during satisfaction surveys. They rely on a simple idea: the main determinant for choosing a vacation destination is the recommendation from friends and family...







3.4- An opportunity market for tour operators and professionals

This niche market also creates business opportunities for small and medium-sized companies and travel agencies that specialize in regional and international tour packages. No longer seen as a retirement product or activity, trekking vacations are attracting more and more young working people.



In **Europe**, numerous small tour agencies are set up in regions where there are naturally many hikers, often at the foot of mountains (such as in Grenoble and Lyon in **France**). Despite the tough competition from internet services, these agencies are thriving. Their asset is customized and personalized packages that are designed to meet the specific expectations of each client. They prioritize human interaction and use their experience and knowledge of the local region to create the best service for their clients.



The pursuit of well-being, respect for the environment and relationship with the local community are all part of their DNA. They offer affordable, sustainable, and responsible tourism, as an alternative to traditional mass tourism, which is attracting a different type of tourists and is becoming increasingly popular. Hiking plays an important role in integrating the foundations of the concepts of sustainable tourism, agri-tourism, environmentally friendly tourism and slow-paced tourism. This kind of tourism is in line with the expectations of these enthusiasts and clientele. Traveling in Europe, the average cost for a 3 or 4-day group hike in the country (including a guide and all amenities) is between 350 to 600 Euros per person. In comparison, you can expect to spend a few thousand euros for a simple tour abroad and about 10,000 euros for a 2 to 3-week stay in an exclusive location outside Europe.



(Photographs: Backpacker in Canada; Farm Tour in the French Alps; Trekking in Nepal; Wildlife Hiking in Antarctica; Fair Trade Tourism in Costa Rica; Slow-pace travel, a worldwide trend)

PROFESSIONAL HIKING

In contrast to local hikers who are mostly self-sufficient, some tourists hire guides to ensure that the hike is safe and enjoyable and that they are supported by a professional's comprehensive knowledge of the area. These trail professionals are commonly known as "guides of low or middle mountains". They have strong knowledge of life in the great outdoors. They are specialized in sport-walking, health-sport, children guiding, handicapped guiding, natural and cultural environment, long distance trekking etc. and provide customized tour routes for corporate travel enterprises. These tours are sold as part of package deals or day trips. Training the hiking guides is an important part of the development of the walking tourism marked (refer to P1 - Chapter 10).



In **Switzerland** (with a population of 8.5 million), about 500 graduated hiking guides are working mostly as freelancers, serving private clients or getting work through specialized agencies. Their daily rate is US\$550, with a half-day rate of US\$430. Groups are limited to 10 participants per guide. The main national structure representing them is the Swiss Mountain Leader Association (SMLA) whose mission is to defend the interest of the profession.



In **France** (with a population of 66 million), there are between 3,500 and 4,000 graduated hiking guides, 80% of whom are working independently. Their rates are between US\$200 and US\$300 per day, depending on the type of hike. The main body representing them is the Syndicate National des Accompagnateurs en Montagne (SNAM).



These entities are partners of the regions, official mountain sports bodies, tourism organizations, national parks, as well as ministries. They are also grouped under the Union of International Mountain Leader Association (UIMLA) which helps to coordinate and standardize the profession between the countries that have structured the activity.

The hiking guides are often members of local guide companies that are the receptacle of their clients. As hiking is the "Daughter of Mountaineering", they share these companies with other professional trail users who are the "High-mountain guides". To date, 1600 licensed high mountain guides are active in France, and 1500 are active in Switzerland. While both hiking guides and high mountain guides share trails and certain activities, each profession has its own network of national and international representative organization.

One of the characteristics of these hiking professions is the direct link and without intermediaries they build with tourists. This non-mediated approach favors, and to some degree, contributes a higher economic value of the activity for the local market. However, as this activity is rarely a full-time profession, most mountain rangers have other jobs on the side, being teachers, shopkeepers, craftsmen, stockbreeders...

EXAMPLES OF A FAIR AND RESPONSIBLE TREKKING MARKET IN LATIN AMERICA

THE COMMUNITY PROFITABILITY MODEL ANDEAN LODGES (PERU)

A company offering a range of hiking, trekking and climbing activities, with associated services, was founded in Cusco in 2006 in collaboration with villagers of the Apu Ausangate region.

Mission: To promote community-based rural tourism by associating locals with the benefits of their work; to build an economic alternative for llama and alpaca breeders, thus preserving their ancestral culture.

Concept: Offering high-quality hiking and lodging experience in line with the fundamentals of a responsible, sustainable, and community-based tourism.

Ambition: To become an exemplary community tourism company in Peru that is socially, economically, and ecologically ethical by ensuring a fair and workable environment for the locals.

With this aim, the team has worked with the development of new trekking itineraries while paying great attention to what constitutes its "business": the natural and cultural wealth and the ancestral and traditional know-how. After several years of working with the regional government of Cusco, the Association for the Conservation of the Amazon Basin and other communities close to the Apu Ausangate, Andean Lodges obtained a Declaration of the Regional Conservation Area. The latter corresponds to a legal framework for the conservation of the ecosystems and the delicate wetlands therein.

It applies its own methods of waste management, carbon footprint compensation, tree planting, and so forth. Since its establishment, all profits have gone to empowering the local community; educating children, restoring the environment, and protecting the protected area.

The management and operational staff include logisticians, cooks, 16 guides, and 50 other local entrepreneurs. They are all locals from these mountains who are trained and qualified to express empathy in their work, be aware of community integration and equity in the redistribution of revenue, to present and come up with new trekking offers, to provide high-quality services, to ensure conservation and protection of ecosystems, local landscapes. They also to carry the identities and cultural displays of their neighboring communities.

Services offered are carefully chosen to meet the simplicity and authenticity expectations of clients. The packages offers the effort of mountain trekking but with the comfort. The agency manages four of the world's highest eco-lodges, all in idyllic locations, serving as base camps for day round hikes to the lodge and stopovers for backpackers.

24 heads of families and 15 young employees, 16 of whom are women, are part of the company's permanent staff. More than 70 other family members work as independent contractors directly with Andean Lodges. For the llama farmers, this represents more than half of their annual income.

Two Quechua communities, Chilca and Osefina, are the original partners of the Andean Lodges enterprise and together they have built an innovative tourist destination. Since the construction of the lodges and the promotion of the Rainbow Mountain, the destination has become an icon for tourism in Peru. Approximately 90,000 tourists visit the site each year, most of them doing a day-long trip. This success has generated significant economic benefits



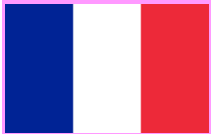
for the region and the two communities. The overall tourism industry in Cusco is also benefiting from this new destination.

"The Andean Lodges" is a project that has achieved moderate but high-quality, inclusive and sustainable development, relying on the foundations of the past.

Source: <http://www.andeanlodges.com/www.andeanlodges.com>



EXAMPLE OF PROFITABILITY AND ORGANIZATION OF COMMERCIAL HIKING IN EUROPE



ALSACE-VOSGES, LAND OF EXPLORATION (FRANCE)

The Alsace plain is located between the Vosges mountains and the borders of **Germany** and **Switzerland**. Its hiking trails are an integral part of the overall tourism industry in the area.

Several domestic tourist agencies are specialized in outdoor activities, especially hiking activities (refer to P1 - Chapter 6). In addition, the region and many municipalities, tourist offices, and commercial organizations have developed websites dedicated to hiking to better promote Alsace "by foot" and to attract more visitors.

The tourism marketing for hiking in Alsace-Vosges relies in particular on travel agencies offering itinerant tours (tours lasting several days to visit that region on foot). The following economic players have integrated these products into their offers:

- 2 locally based tour agencies;
- 7 other tour agencies throughout **France**;
- Abroad: 10 tour operators in **Germany**, 8 in **England**, 3 in **Belgium**, **Netherlands** and **Luxembourg**, 2 in **Denmark** and **Sweden**.

The services offered are predominantly week-long (priced starting at 600 Euros) but also available for shorter stays (lasting 4 to 5 days):

- Crossing the mountain range or round hiking trips around the summits;
- Cultural heritage hiking tours: such as wine tasting trail and visiting medieval castles

(Source: ADT 2020, ph. Infra-Massif des Vosges)



EXAMPLE OF A FLEASING WILDLIFE ECOTOURISM IN AFRICA



GORILLA-TREKKING (RWANDA, UGANDA AND CONGO)

When commercial trekking tourism comes to the aid of animalistic causes! This is the last gorilla conservation site where the gorillas can live in the wild in their natural habitat.

The most popular model of "responsible" hiking tourism is ecotourism, some of whose products generate income for the tour operators, for the local governments and local actors, and also help to pay for the preservation of endangered tourist and natural heritages. This is the case of the gorillas, which are classified as an endangered species by the OMPE (World Organization for the Protection of the Environment).

These last gorillas are protected by locals in the African regions from the moment when tourism become more profitable than poaching or than the exploitation of their forest habitat. In this objective, 10% to 20% of the income from such tourism is returned to the local communities. However, this virtuous concept of accustoming the animals to peaceful social interaction with humans also makes them more vulnerable to poaching.

The cost of visitor permits ranges from US\$600 - \$1500 per hour per gorilla trekker (2020 data). Accommodation and other service costs near the parks are very high compared to the local cost of living. These "gorilla treks" are the focus of international tour operators who offer 10 to 15-day stay periods starting at US\$10,000 per person, excluding international airfare.





3.5- Benefits in European countries

Hiking trails, depending on its location, can be very costly to build. Maintaining these trails also represents an investment in itself. Although this work is often carried out as a whole or in part by voluntary teams or local clubs (refer to P1 - Chapter 4).

However, the hiking business is still considered worthwhile and viable. Well-managed parks and trails contribute to the general well-being of the community and carry a powerful economic significance. These hiking-tourists "consumes" the region and its landscapes and identity, its trails, the services and the hospitality before, during and after the hike. Hiking and related activities create jobs and serve the economic vitality of the communities and their surrounding regions. Hiking trails are an integral part of the outdoor recreation experience and stimulate business opportunities, influence business implantation decisions, increase property values, reduce medical costs by promoting physical exercise, and generate tax resources due to consumption. These trails also provide free to low-cost recreational opportunities and transportation options.

The economic impact is real although difficult to quantify given the multifaceted nature of the practices and the wide distribution of the benefits.

So, many areas invest in hiking trails because of the broad profitability.

Some hikers choose to stay in the same place of hiking trails returning to their place of accommodation every evening (corresponding to the so-called "Daisy flower " hike). Others choose "itinerary" or "roaming trips", going on crossing regions by hiking, sometimes over hundreds of kilometers and often without sleeping two nights at the same place. In France, the National Resource Center for Nature Sports of the Ministry of Sports estimates that roughly 27% of hikers choose this form of "itinerary".

Europe is a real experimental area *for this dynamic walking leisure, the only continent to have founded an international hiking federation. The European Ramblers Association promotes a network of lengthy trail treks that crisscross the continent and encourages consumption of the territories crossed (refer to P1 - Chapter 5).



EXAMPLES OF BENEFITS GENERATED BY TRAILS



« GTA », THE GRANDE TRAVERSÉE DES ALPES AND THE STEVENSON PATH (FRANCE)

€60 is the daily expenditure of a walker according to the French Association that administers the Great Alpine Cross ('GR5', a 600 km trail from Geneva to the Mediterranean). Another iconic circuit of the same order, the "GR70" of the Stevenson Trail (225 km), which crosses the Massif Central, generates an annual income of €3 million for the region (according to 2010 figures). This type of hiking allows the development of territories that are often isolated from economic growth and also makes it possible for sites initially dedicated for winter skiing to operate their business all four seasons.

(Source: Montagne Magazine, ITW of the president of the Grande Traversée des Alpes and of the organizer of the Rennes hiking exhibition in France)



LE CHEMIN DES BONHOMMES (FRANCE AND SPAIN) 'Gr 107', 224 km

"For every euro invested in the development of hiking, 4 euros is generated for the local economy," explains a study by the General Council of the French Department of Ariège in the Pyrenees.

If we only consider the "Chemin des Bonhommes - GR107" which crosses the French-Spanish border, the main hiking trail in the region, the return-on-investment ratio is ten times higher; every euro invested in this popular route yields as much as 40 euros. All thanks to the visitors who walk, eat and sleep in the region, spending each an average of 50 euros per day.

The territories crossed by this hike, certified and promoted in the tourist programs, have fully grasped this opportunity. They also maintain and develop their trails with the utmost care.

(Source: Vie Locale, Ariège published on August 15, 2009)



TOTAL IMPACT ON THE SWISS ECONOMY

1.6 billion Swiss francs are spent each year by the estimated 2.7 million Swiss hikers. This includes both the purchase of equipment and the costs on site (meals, accommodation, gondola, etc.).

They make an average of 20 outings per year with an average duration of 3.5 hours hiking, which represents 190 million hours of hiking time.

The 12,000 jobs generated by hiking should also be considered for its impact on the economy.

(Source: Swiss Sport 2008 and Suisse Rando 2011 studies)





THE PATHS OF SAINT JACQUES DE COMPOSTELLE

These historical and spiritual walks connect some of the most important sanctuaries of the Christian West.

Their foundation dates back to the Middle Ages and they crisscross and connect Spain, Portugal, France, England, Belgium, the Netherlands, Germany, Switzerland, Italy, Austria, Czech Republic, Slovakia, Denmark, Poland, Croatia, Hungary, and other countries, bringing potentially considerable income to local communities.

For example, each year 70,000 pilgrims from 114 nationalities pass through the small stopover town of Saint Jean Pied de Port (1,800 population) in the region of Nouvelle-Aquitaine in southwestern France. This activity brings roughly €3 million to the local economy. High spenders are becoming more and more common in this small town, which now has 140 stores, 25 restaurants, and 470 beds for transiting walkers.

The neighboring region of Occitanie, more precisely Lot region in France, is crossed by 155 km of one of these paths of Chemin de Compostelle. If walking 20 km per day, travelers will need 7 days of food and lodging in the region. A 2015 local report reveals that the average daily expenditure for hikers is €42.10, resulting in an annual turnover of €4.4 million for the region.

More globally, the European Compostela trail network attracted 277,854 hikers in 2016:

- *These visitors spent €281,743,956 or an average of €1,014 per person (5.8% more than in 2015);*
- *The majority of these expenses (€172.4 million) relates to the pedestrian pilgrimages (accommodation, drinks, food, and other amenities), equivalent to €620 per traveler;*
- *The average daily expenditure for an average trip duration of 15 days is €38.*
- *The second most important expense (€55.5 million) comes from preliminary purchases of equipment (gear, clothing, topo-guides, etc.), which amount to an average of €200 per traveler.*
- *Finally, transportation costs (€53.9 million) to get to the departure point and back amount to an average of €150 to €250 per traveler.*

Many local authorities use the argument that their city is the site of the "Official and Historical" departure point of the pedestrian pilgrimages to attract more hikers. But according to the Observatory of Pilgrimage Trails within the Compostela Paths Agency, which manages this hikes network, the number of walkers is very uneven between the different trails and countries. One of the paths in Spain, the "Camino Frances", has expanded so much so that walkers are finding themselves disappointed by the over-marketing of this route. Mass tourism with the risk of "folklorization" is detrimental to the quality and authenticity of the hikes and sites. On the other hand, other paths tend to suffer from a lack of attendance.

(Source: 2016 study by the Federacion Espanola de Asociaciones de Amigos del Camino de Sa





3.6- Benefits in North American countries

In North America, the impact of hiking trends has the same history and dynamics as the trends in Europe. Analyses of the profitability of trails are accurate, particularly in the United States, which has a very well-developed trail system, a sprawling network that is generally free to use and freely accessible. In fact, trails play a fundamental role in driving the economy of the inland areas.

The annual economic value generated in the United States by outdoor recreation (of which hiking is only one activity) was estimated in 2012 by the Outdoor Industry Association (where the American Hiking Society is a member) as:

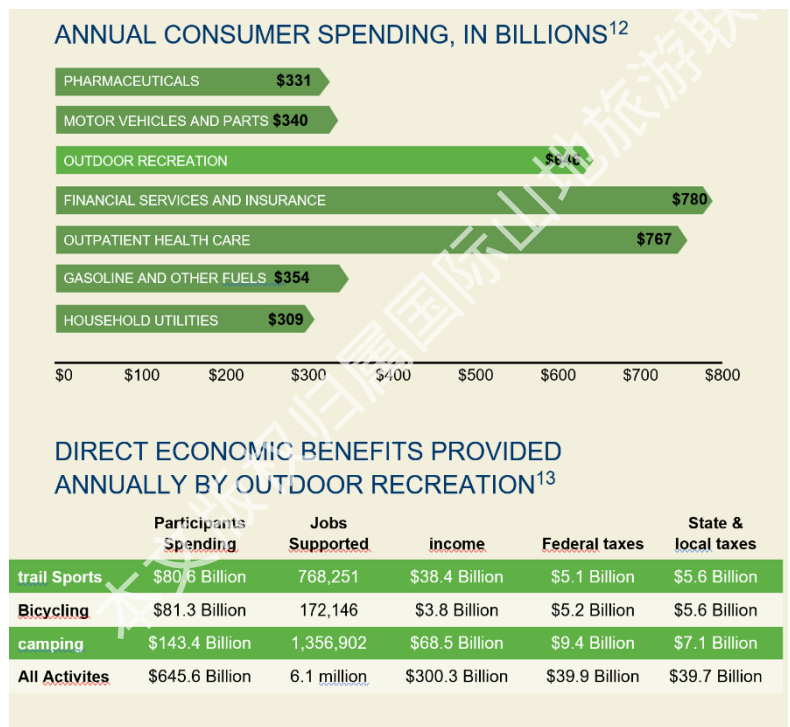
- US\$646 billion in global spending, including US\$81 billion from trail recreation (hiking, mountain biking, horse riding, four-wheeling and so forth);
- 6.1 million jobs (with wages) of which 768,000 are related to hiking and recreation/tourist trails (that is more than twice the number of oil and gas-related jobs in the country)

(Source: American Hiking Society)

Additionally, outdoor recreation and sports generate \$80 billion in federal, state and local taxes each year, including \$10.6 billion from the trails recreation businesses. And as more outdoor recreation dollars flow through the mainstream economy, the "multiplier" or "ripple effect" reaches \$1.6 trillion annually (including \$196 billion initially from trail recreation). Using the same reasoning, outdoor recreation of all forms contributes to 12 million jobs in the United States.

Furthermore, the outdoor recreation sector remains resilient and continues to grow, even in the face of an economic downturn. For example, the outdoor recreation industry grew by about 5% per year between 2005 and 2011 during the global financial crisis, with hiking playing an important role in this expansion. During the current COVID-19 pandemic there has also been a sharp increase in needs of outdoor, nature and trails. (refer to P1 - Chapter 7).

On the left is a **TABLE** of expenditures and benefits in all direct and indirect sectors related to outdoor leisure and sports in the USA, where hiking is the predominant activity.



(Source: Outdoor Industry Association 2012/ American Hiking Society)

A recent study by the Washington State Department of Transportation found that the high return on trails (walking, hiking, and cycling) "contributes more than \$8.2 billion to the state's economy". The study addresses economic benefits as well as environmental and health benefits and makes recommendations on ways to improve access: "When you consider both the economic and health benefits, it is clear that we need to invest more in our trails and public lands", announced Jill Simmons, Chief Executive Officer of Washington Trails Association.

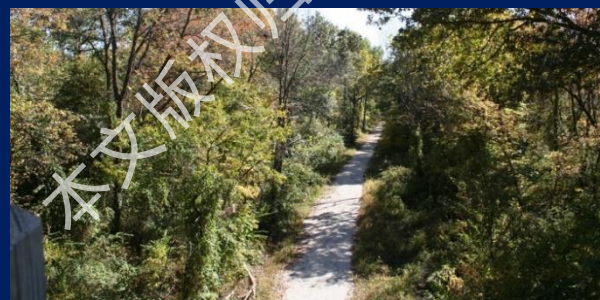


(Source: Washington State Recreation and Conservation Office, January 9, 2020)

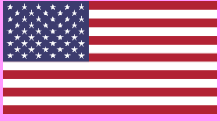
Additional benefits

Trails, as community and tourist facilities, bring sustainable value to areas, to their attractiveness, to the good life and to the desire to live there. Trails, parks and open spaces also have a direct and positive impact on property values, contributing to the creation of economically valuable, nature-based neighborhoods. A survey in 2008 by the National Association of Home Builders in the USA found that "trails are still the main community facility sought by potential owners". Trails were cited by 57% of potential homebuyers, ahead of public parks and outdoor pools, and the availability of free, open trails outranked 16 other options, including safety, golf courses, parks and access to shopping.

In Dallas for example, developers report that property values increase by 25% if they are adjacent to the "Katy Trail". The Katy State Park Trail in Missouri is the longest recreational rail trail in the country with 382km and countless entry points.



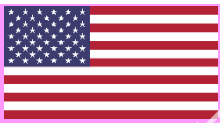
EXAMPLES OF BENEFITS GENERATED BY TRAILS



APPALACHIAN NATIONAL SCENIC TRAIL VIRGINIA (USA)

- 2 million users per year, including hikers and walkers;
- These users spend US\$125-168 million during their visits;
- They contribute to 27 million worth of local spending;
- They generate 36 million worth of local economic activity.

(Source: Appalachian national scenic trail pilot survey - 2010)



VIRGINIA CREEPER TRAIL, VIRGINIA (USA)

On the 56 km Virginia Creeper Trail in southwestern Virginia, residents and non-locals spend more than US\$2.5 million annually on outdoor recreation, including US\$1.2 million in expenditures by visitors.



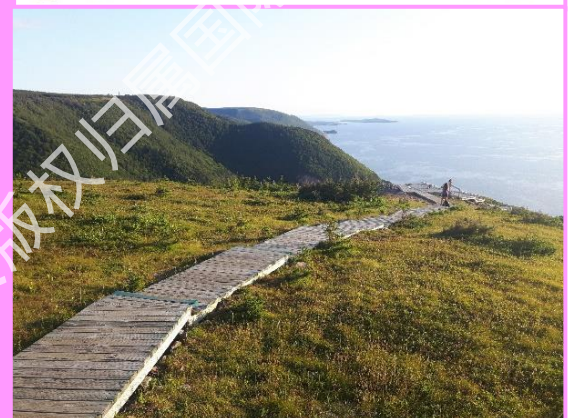
THE PICTOU TRAIL (CANADA)

The Pictou County Trail Association in **Canada** has developed a multi-use nature tourism/sport trail (hiking, horse-riding and cycling) along an abandoned railroad track that offers a unique 37 km route incorporated into the trans-Canada Trail network. This new trail provides the opportunity to interact with wildlife, particularly deer, birds and other animals.

"Nature tourism is one of the fastest-growing segments of the tourism industry," remarked Gordon Balser, Minister of Economic Development. "Our investment in trails will ensure that the province Nova Scotia is an even more attractive destination for those outdoor enthusiasts who will bring their tourism dollars to our communities allong the road. This trail will provide our community with a new recreational facility for healthier living", says Jeffrey Turnbull of the Pictou County Trails Association. "We'll also benefit when visitors use the trail and spend time and money in communities."

Many partnerships have been formed to advance the project. Donors (private companies) have provided construction equipments while military reservists worked to build the bridge across the John River. Volunteer hikers helped mark and improve the trail and the city council has also provided storage and office space.

In addition to this community support and to help the project, the association has received a US\$50,000 grant from the province's economic development department. Human Resources Development Canada contributed US\$48,000 and the Trans Canada Trail Foundation contributed an additional US\$10,000.



This multi-purpose track is part of a larger project to create a trail system that will make Nova Scotia a world-class hiking destination, aiming at attracting 36,000 additional tourist-hikers each year.

(Source: Trails to Hike Economy - Economic Development, January 2009)



THE PICTOU TRAIL (CANADA)

- *This trail, located in Ontario, Canada, receive 410,060 visitors per year;*
- *Hiker expenditures generate CA\$26,084,817 worth of direct economic impact, with a gross economic spin-off of CA\$60,255,926 annually;*
- *Those expenditures supported 1,138 full-time jobs in Ontario...*

(Source: The Ontario Hikers and Trail Users Survey, Hike Ontario, 1998)







3.7- The Chinese potential



Mountainous regions have great opportunities for developing hiking offers.

In this area, **China** has been spoiled by nature. 76% of the national territory are covered by mountains (consisting of the largest massifs in the world: the Himalayas, the Tianshan, the Indu Kush, the Karakorum, and various other gigantic natural reserves). These areas are inhabited by a mosaic of colorful ethnic groups with traditions that are still very much alive. The Middle Kingdom thus has a strong lever for socio-economic development through recreational, sports and tourist hiking.

Although the system of marked and preserved trails is not yet developed except in organized tourist sites for standardized visits, hiking for pleasure and passion is developing, especially through outdoor clubs. A 2019 hiking survey, carried out by Alibaba for the website Hiking China, surveying 4103 hikers and a hundred specialized and active clubs, revealed that 60 million hiker outings were recorded that year (including multiple outings by single hikers). This only represents about 4.3% of the Chinese population, showing the enormous growth potential of the Chinese hiking industry.

44% of these Chinese hikers spent between US\$150 and US\$1500 per year on their hiking experience (including travel, accommodation and food, but excluding hiking gear). Because this survey was conducted by clubs and hobbyists, it mainly focused on hikes on free and open-access trails.

The common rates charged by Chinese clubs for an all-inclusive hike are approximately US\$75 per person for a weekend and US\$30 for a day trip (based on a minimum of 30 participants).



Photography: Gonggashan Massif in Ganzi Sichuan, Shuang Qiao Gu Massif of Signuniang in Aba Sichuan, Xianju Volcanic Massif in Zhejiang





©Prisme : Children hiking using abseiling gears leading up to the Alps (France)

3.9- Hiking tomorrow ?

As our society becomes more urbanized, the appeal of nature grows. And hiking is a major attraction because of its simplicity and its easy access.

In addition to the promising predictor of growth demand for hiking equipment by 2026, there are other societal factors to consider in the forthcoming years.

- By 2050, according to the World Bank, 68% of humanity will live in cities, compared to 56% today. The need for escape and nature is also expected to follow the same trend;
- With an aging population, the number of walking enthusiasts should continue to rise, and the young seniors are a high-potential target for tourism (more time allocated to recreational activities, higher purchasing power, and the possibility of year-round tourism...);
- The desire for wellness and health will grow to be more and more prevalent in the whirlwind of our contemporary civilization.

This prospect of increased participation in hiking and outdoor recreation in general, as well as time spent on trails and in nature, should presumably be true across almost all demographic, climatic, and land use conditions. Economic growth, growing populations, and technological innovations (better equipment, GPS, etc.) that make hiking considerably more practical, are all factors that support this observation.

The 2012 study "Trends and Futures in Outdoor Recreation" supported by the US Department of Agriculture - Forest Service shows that participation in outdoor recreation is expected to increase by 2060, with day hiking becoming the fastest-growing outdoor recreation activity among adults, increasing from 70% to 113%.



Concerns about the future of hiking

This foreseeable surge in need and demand nonetheless raises some serious questions:

- The number of recreational facilities and sites will have to keep pace with this growth if trails are not to become a scarcity factor or fall into the spiral of mass tourism. This issue of creating new trail networks is also part of this perspective.

If the number of trail sites remains at the current level while there is a growing user population, the results will likely be:

- o Decreased access and recreation opportunities for individuals;
- o An increased conflict of use;
- o Increased commodification with higher access prices for trails on privately owned or used land;
- o Considerable challenges for trail managers and planners on state owned lands. There will be a need to ensure:
 - that equitable and non-monetary selective access is preserved;
 - that recreational opportunities remain viable;
 - that the environment, especially unspoiled nature, is preserved.

To satisfy visitors' need for nature while preserving the quality of trail experiences, and to comply with wilderness legislation, the managers may increasingly face a potentially unpleasant and unpopular prospect to have to regulate more and more the trail access.

- Lastly, climate change can also be expected to either directly or indirectly affect the availability of resources for hiking in countless areas.

In any case, investing in a controlled development of trails, peri-urban or backcountry, community and tourism, is and will remain a valuable asset and an important source of capital for communities and the country.



KEY POINTS TO REMEMBER



OTHER COUNTRIES, OTHER MANAGEMENT AND ORGANIZATION STYLES

4

Recreational and tourist access to nature is sacred in some countries, while less so in others.

A structured and regulatory framework for trail and hiking development exists in many countries, while in others it is limited to nature reserves.

Hiking trails are protected by law in different countries, but not in others.

Hiking is more of a tourist activity in some countries, while it is more of a recreational activity for local communities in others.

What are the management and organization patterns of trails and hiking in eight very different countries? This is what we will look at in this chapter, which also presents several operating models of hiking sites.

CHAPTER SUMMARY

- 4.1 The United States
- 4.2 Japan
- 4.3 Sweden
- 4.4 France
- 4.5 Serbia
- 4.6 Nepal
- 4.7 Peru
- 4.8 Madagascar
- 4.9 Other sites with other management models
- 4.10 Management and volunteers: a very successful partnership



4.1- The United States



"Hiking Trails in America, Pathways to property"

The legal environment for hiking

In 1965, the President of the United States at the time, Lyndon B. Johnson, launched a national (federal) trail building and management strategy in a speech to Congress: *"The forgotten outdoor enthusiasts of today are those who like to walk, hike, ride horseback or bicycle. For them we must have trails, as well as highways for others... Old and young alike can participate. Our doctors recommend and encourage such activity for fitness and fun."* He requested for the construction of more than 100,000 km of new trails in national forests and parks. This was not just empty words, because the project was supported by both Congress and the American people.



Thus, the 1968 law, amended in 1978, provides the framework for the National Trails System, promotes its development, ensures its sustainability and describes several categories of trails:

- "National Scenic Trails": at least 100 miles long (160 km) with outstanding natural, picturesque or historic resources. They must be marked with refuges and shelters for users. These trails may be constructed and managed at federal, state or local levels, but their administration is national and environmental protection is given priority through public control;
- "National Historic Trails": they follow historic routes with the same regime as the previous category, which is also a long-distance route, with a length of less than 100 miles;
- "National Recreation Trails": without minimum length requirements, metropolitan, urban and sub-urban, easily accessible to all. Unlike previous trails, which must be legislatively validated in Congress, these recreational trails may be designated by the Secretary of the Interior or Agriculture. They may exist entirely on federal or state, local or private property. The ratio mentioned in a report "Trails for America" prefiguring the law suggested 25 miles (40 km) of nearby recreational walking trails per 50,000 residents.
- "Park and Forest Trails": intended for a wide range of users: hikers, picnickers, campers, and day-trippers. These trails are established on public lands and are managed by federal or state agencies. The law suggests that states encourage the development of these trails by assisting in land acquisition and development and adopt legislation to protect landowners from liability claims if necessary, so as to encourage them to accept trail easements.

- "Connecting Trails and Secondary Trails": providing intermediate points of public access to various national scenic, national historic, and national recreational trails, and connect these trails from multiple locations.

The National Trails System Act encourages federal agencies to engage volunteers and the public in trail planning, maintenance and management. Whether it is volunteer associations, hiking clubs, participatory holidaymakers, Americans and many non-profit organizations (e.g., the Washington Trails Association), they are strongly involved in the protection of the trail and its environment every year.

In addition to public subsidies, a system of financing has been organized, which has attracted a large number of donations. The National Trails Fund of the American Hiking Society (AHS) is a national privately funded subsidy program dedicated exclusively to the construction and protection of hiking trails. Established in 1998 in response to the increasing trail maintenance backlog, the National Trails Fund has helped hundreds of grassroots organizations acquire the resources needed to protect the precious trails in the United States. Up until today, the AHS, whose mission is to ensure sustainable access to quality hiking experiences, has funded 192 trails or maintenance projects with a total assistance of US\$588,000.

Hiking in protected natural areas

12% of the national territory is in protected areas (i.e., 1/10 of the world's protected areas). Among these areas, 62 are national nature parks, with a total area of about 210,000 km². Most of these national parks are open and free to enter. They are managed by the National Park Service (NPS), which operates a total of 419 parks and protected sites, out of which only 116 charge entrance fees. The cost of tickets ranges from US\$5 per person to US\$35 per vehicle. The revenue from the ticket sales is used to compensate for the cost of managing the park, but no parks are directly operated for commercial purposes. Commercial services near or within the parks include small businesses, restaurants, accommodation, guides, etc.

In 2019, the NPS registered a total of 328 million visitors. These are overwhelmingly U.S. citizens (according to park data, between 4% and 14% of tourists are foreigners). Visitors can freely use the 18,000 miles (29,000 km) of trails, although some parks will require permits to spend one or more nights in the wilderness.

The United States Forest Service, an agency of the U.S. Department of Agriculture that administers the nation's 155 national forests and 20 national grasslands, and more than 158,000 miles (255,000 km) of trails, reports an annual attendance of 165 million visitors to national forest areas. 40% of these visitors walk or hike (i.e., roughly 66 million people).

The Bureau of Land Management, an agency within the United States Department of the Interior, governs more than 16,000 miles (26,000 km) of trails, which are distributed on federal, state and private lands, reflecting the rich trail system in the United States. Nearly 5,000 miles (8,000 km) are National Historic Trails, more than 600 miles (1,000 km) are National Scenic Trails, and about 500 miles (800 km) are National Recreation Trails.

The United States Fish and Wildlife Service is a service within the U.S. Department of the Interior whose mission is to protect nature and wildlife on 600,000 km² of land and water. Each year, 47 million Americans use the plentiful huts and refuges managed by this agency to enjoy hiking, fishing, hunting and photography. They also use the more than 1,500 miles (2,400 km) of trails to access these huts (sometimes sections of legislated national recreation, scenic or historic trails).

The public hiking industry

Since the promulgation of the law, the national trail system has grown parallel with Americans' growing demand for hiking and nature:

- The mileage on federal land doubled and that on state land tripled;
 - o Trails on federal lands, such as in national parks or national forests: 88,000 miles (142,000 km) in 1965 / 194,000 miles (312,000 km) in 2015;
 - o Interstate trails, such as state-level parks or forests: 15,000 miles (24,000 km) in 1965 / 42,500 miles (68,000 km) in 2015.
- The number of users has increased significantly by 43 million (i.e., 14% of the total population): 35-million-day hikers/walkers and nearly 10 million multi-day hikers (backpackers);
- Numerous public and private partnerships have been nurtured, encouraging citizens to help manage and maintain their trails and the environment in their communities by taking ownership of the hiking experience: Each year, 1 million volunteer hours help on national trails classified as scenic and historic.

Today, there are 11 National Scenic Trails (13,500 miles, i.e., 22,000 km in total) and 19 National Historic Trails (19,500 miles, i.e., 31,400 km in total) maintained, marked and open to the public. Although these trails represent the longest and perhaps most famous trails in the United States, there are also 1,244 National Recreation Trails, totaling an additional 24,800 miles (40,000 km). All these trails are designated at the federal level and are a part of the National Trails System.

However, thousands of additional miles of state, regional and local trails are not included in the "National Trails System". These trails are all vital to the communities they serve, playing an essential role in the development of hiking, and providing Americans with practical opportunities "closer to home."



In addition to meeting the needs of outdoor recreation, in particular walking, many of these trails – in urban and suburban areas – are also used to meet the basic transportation needs of people walking or cycling. Whether they are children walking to school, adults walking to work, or teenagers walking to a sports field for after-school practices, trails in and around population centers meet the full range of needs identified in the original Trails for America report.

Although the Federal Highway Administration (a division of the United States Department of Transportation) does not manage any trails, it does administer the Recreational Trails Program - a subset of the Transportation Alternatives Program. The Recreational Trails Program (RTP) provides partial funding to help build and maintain local recreational trails.

The trails most used by the U.S. community are located within 60 miles (96 km) of users' homes, and 30% of people are within 15 miles (24 kilometers). This information reveals how necessary it is to plan trails close to homes so that more people can access and enjoy them.

This abundant variety of trails has demonstrated new ways to connect American communities together, with the landscapes, with surrounding businesses, while improving the market value of houses near these hiking and walking routes.

The commercial sector of hiking

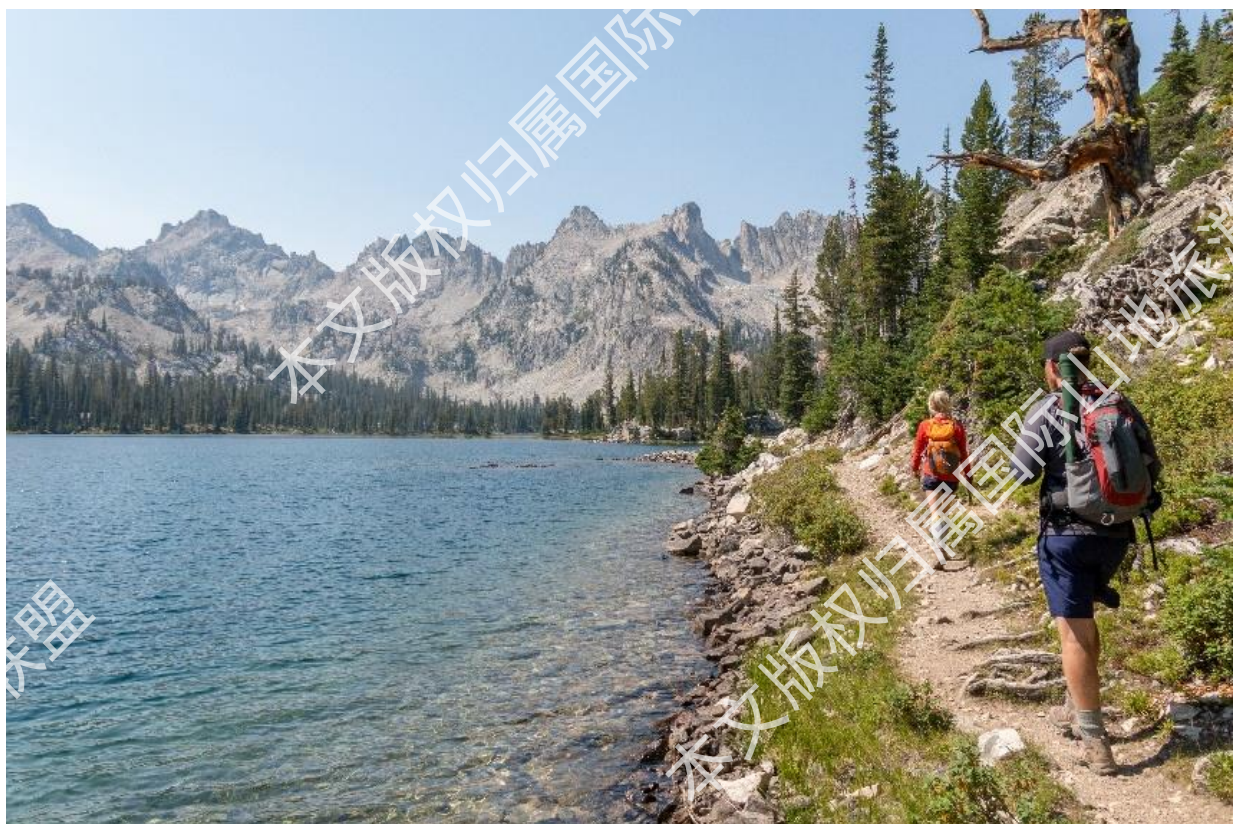
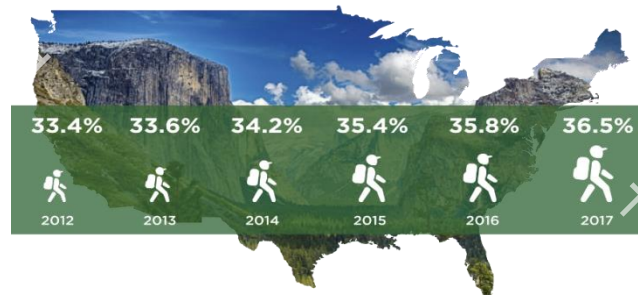
In addition to the windfall profits of the national tourism industry and the benefits brought on by recreational hiking - business opportunities, wellness, health, and so on - the trails are increasingly attracting foreign tourists, as evidenced by the growing attraction of national parks among international arrivals to the United States.

The groups of walking tourists also benefit hiking professionals: tour operators, specialized agencies, and guides, as many of the visits are done on foot.

Until 2010, there was no nationally recognized formal training for hiking guides. Since then, the American Hiking Guide Association has been providing programs according to the international professional standards established by the Union of International Mountain Leader (UIMLA) (refer to P1 - Chapter 10). These training programs for hiking and trekking guides are approved by the National Park Service, the U.S. Department of the Interior and the International Mountain Leaders in European and South American countries. Up until today, **the United States** has more than 700 certified guides.

(Sources: American Hiking Society / June 2015; NTS annual report; Outdoor industry association 2013 data; U.S. Travel Association)

Share of Overseas Arrivals Visiting
NATIONAL PARKS and MONUMENTS







4.2- Japan



In collaboration with François BURTNEY, National trainer of mountain leaders in France, trainer in Japan

"Hiking on the land of fire and rain dominated by Mount Fuji"

The legal environment for hiking

The modern recreational hiking in Japan has been modeled on hiking in the mountains of Europe and North America. So it is not surprising that hiking in Japan is very similar to the way it is organized and practiced in the West.

Japan does not have the general "right of access" to contact with nature as for example in Scandinavian countries. However, the pedestrian traffic of hikers or walkers is free in principle and equal to all in the natural public area with thousands of kilometers of trails. The use of trails on private land requires the agreement of the landowner and off-trail hiking is generally prohibited, especially in national parks.



Unauthorized camping is theoretically illegal on public land and private property (outside the 3,000 or so organized camping areas). However, these two rules are not always enforced, because Japan has a tradition of "sleeping outdoors". Therefore, sleeping under the stars is accepted in many places if it is done without causing harm or disturbance.

On many sites, hikers are encouraged to register before setting out: a registration form can be provided free of charge on-site or downloaded online, for example on Japan Mountain Association's (JMA) website, and a mailbox must be placed at the entrance of the trail. Some prefectures have made this compulsory and hikers who fail to do so risk a fine of US\$500.

Hiking in protected natural areas

70% of the national territory is covered by forests and volcanic massifs (which requires the hikers to be aware of the state of volcanic activity and the dangers of climbing before starting their hikes). 15% of the territory is protected. There are 28 national parks and 55 other nature reserves. The frequent shrines on the peaks, ranging in size from small altars to temples, reflect the ancient religious significance of mountains in Japanese culture.

The land in some national parks belongs to private landowners, whose main purpose is to provide natural recreation areas for visitors, thus providing means of subsistence for the local community.

Use of the parks is free of charge. In addition to security registrations for hikers, "passes" are sometimes required for overnight stays in huts and shelters that are alongside the long-distance trails in the parks.

The following actions are legally prohibited in designated areas and are indicated with all the politeness appropriate to the country's culture: «Please»... do not disturb animals and plants, do not collect lava, do not camp outside of designated sites, do not make fires, do not go off the trail, do not write graffiti on rocks, do not

damage tree mold, keep restrooms and other public facilities clean, and take all your trash with you. Except for some short walks for classical tourism, there are no trash cans on natural and mountain trails.

The public hiking industry

Japan is as big as China's Gansu Province, but with a population 5 times larger that is concentrated on 1/3 of the national area. The rest is mountainous. Naturally, the country has developed a dynamic hiking culture that goes hand in hand with its geography and this context of urban concentration.

A vast network of recreation and sports trails offers abundant opportunities, from long multi-day hikes through national parks to easy day trips from the city. The initiative for this extensive trail system came from the Minister of Health, Labor, and Welfare in the 1970s whose goal was to encourage people to experience nature and culture in a positive and healthy way, a goal that was shared by the local governments.

With the many "baby boomers" on their way to retirement, the demand for health-conscious and nature-oriented lifestyles is becoming stronger. Typically, Japanese people go on daily walks, selecting 10 or 20 km sections based on the intermediate entry/exit points of long-distance trails. This is how the country's trail network is designed so that everyone can organize customized hikes. This organization meets the expectations of most Japanese hikers, who manage their excursions by themselves without seeking the services of guides, clubs, or specialized agencies.



Local hikers' demand for long-distance discovery hikes, known as "nature hikes", is increasing. The 10 largest trails alone total nearly 3,000 km; the longest one, opened in 1974, measures 1,700 km and is suitable for 40 to 50 days of walking. And the network of maintained, secured, marked and signposted trails is still expanding, supported by the Ministry of the Environment and regional and municipal programs for the revitalization of certain areas through the development of ecological tourism.

Every year, 3,000 people are injured on the trails of Japan, most of them in the mountains. Seniors over 60 years old account for nearly 80% of the rescues and most of them are serious cases. The causes are: lack of preparation, lack of physical strength and orientation errors. The rescue is organized by the police and firemen. Depending on the circumstances, they can also be assisted by private rescue teams. The cost of search and rescue is charged to the victim or his/her beneficiaries, so appropriate insurance is strongly recommended.

25% of the Japanese population enjoy walking and 10% go hiking regularly. Among the excursions, the most popular ones are those that end with a hot bath, Onsen, in natural springs. Another local custom of hikers is to carry a bell along the trails, the chime of which is supposed to scare bears away.

The commercial sector of hiking

Tour operators offer "Japan by walk" packages to their foreign clients, especially old imperial routes and historical pilgrimages, such as a two-month Shikoku trail linking 88 temples. Professional agencies organize trips and hikes by offering services such as hotel reservations, transportation of luggage from one accommodation point to another, supervision by guides, etc.

Japanese guides are trained on four levels:

- Nature and heritage hiking guides working in summer and winter but outside the mountains;
- Mountain guides leading mountain hikes in summer and winter;
- Alpine guides leading climbing and mountaineering in Japan;
- High mountain guides with international diplomas are suitable for practicing in all the mountains in the world all year round.

The guides are grouped in about fifty local associations, all of which are members of the national association: the Japan Mountain Guide Association (1800 members and 51 local sections). It provides various public services, including training and certification, research and publications, safety education for mountaineering and hiking enthusiasts, etc.

The management of refuges, accommodation and resupply points is one of the sources of revenue generated by the trails. While some mountain huts are free access shelters, with a minimum of a roof, water supply and toilets, many refuges are guarded and operated, sometimes privately, selling overnight stays and meals. Hikers also often use other "home-stay" or "bed & breakfasts" type facilities, small traditional hotels, or temple lodges along with the pilgrimages. Whichever option you choose, it is preferable to make a reservation by considering the attendance flow.

Thus, most hikers spend between US\$100 and US\$120/day, or even more if the organization is done by a tour-operator.





4.3- Sweden

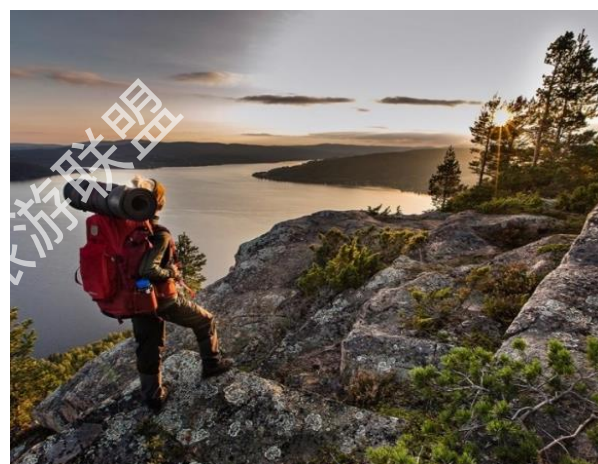


In collaboration with Benjamin BILLET, Secretary-General of the European Network of Outdoor Sports

"Sweden has no Eiffel Tower, no Temple of Heaven, no Niagara Falls or Big Ben. Not even a small Sphinx. Sweden has something else: true free access to nature. That's its monument. "

The legal environment for hiking

The Allemansrätt, a principle dating back to the Middle Ages has crossed the ages to the point where it has been enshrined in the Swedish Constitution. The Allemansrätt establishes that nature is a "common heritage" belonging to all. In particular, it allows people to walk on all public and private lands (outside of private spaces like gardens and with the obligation not to cause any nuisance). This benefit is offered so that everyone can enjoy nature and landscapes for recreational purposes and in accordance with an environmental ethic based on discernment and responsibility. The Allemansrätt, literally the "right of all people" or "right of everyone", emphasizes both the collective - even universal - and the individual dimension.



"This right is part of our culture, it gives us full freedom to explore, to discover the territory and to make our own way," explains Dag Avango, a researcher at the Royal Institute of Technology in Stockholm and a hiking enthusiast. However, he points out that this right must be accompanied by responsibilities: *"You have to respect the owners to be as discreet as possible. For example, you must not cut down trees. You have the right to make a fire, but you must use the branches on the ground to do it. And of course, you must leave with all your trash... This is a huge privilege, and we have to protect it because our quality of life would be diminished if this law were to change".*

The maximum duration for wild camping in private, public or nature reserves is two nights. Tents must be out of sight of residents' houses, hiking trails and park entrances. Feces must be buried more than 15 cm in the ground and more than 50 m from dwellings and waterways. Collection of berries, edible mushrooms and wildflowers for non-commercial purposes is allowed. However, protected, or vulnerable species must not be disturbed or collected: a principle that is widely applied.

Such a principle is only viable if the behavior of visitors is fully respected, and their number is reduced; local tourism and common culture are its pillars. The philosophy of *lagom*, a true Swedish art of living which means "neither too much nor too little" or "slow and less is more", instills in the Swedes an innate sense of moderation, reasoned consumption, and balance, all while taking others and the environment into account. Health and ecology are the two key words of *lagom*, which invites people to spend time outdoors, in contact with nature. Hiking is a leisure activity and walking tourism is privileged.

This free access to nature is a pride of the Swedes, who rely on this right to promote tourism. Other countries, especially in Northern Europe, have adapted the Swedish principle by embodying this freedom of access to nature according to their culture: the Allemansretten in Norway and Denmark, the jokamiehenoikeus in Finland, the almannaréttur in Iceland, the igäuheõigus in Estonia.

Hiking in protected natural areas

Sweden has 3100 nature reserves and 28 national parks, i.e., 14.5% of the national territory is classified as protected areas.

Free public access is not entirely applicable: ecological protection and the quality of hiking experience are priorities. These parks and protected areas have special regulations that visitors and hikers must respect. Campfires are generally allowed in designated areas with wood brought in or provided and may be prohibited where the risk of fire is high. Dogs are not welcome. Motor vehicles are not permitted in the wilderness.

In order to improve the safety of hikers, the marker posts on some wide-open trails have a number to help locate a rescue call, which is conducted jointly with local emergency services and park professionals.

Naturvårdsverket, the Swedish Environmental Protection Agency, is an independent authority that acts based on a governmental ordinance, with funding from the state. Its main tasks are to present proposals for environmental policies and legislation, to ensure their implementation, and to monitor the fair application of the Allemansrätt - the customary right of free access to nature and trails.

The public hiking industry

Hiking activities and trails are organized and developed by a large number of associations dedicated to outdoor life and nature protection.

There are about 400 hiking routes at different levels in Sweden, which are generally well-marked and offering hundreds of taverns, mountain bases and refuges. Many of these hiking trails in Sweden are hundreds of kilometers long and are divided into sections with intermediate accesses and exits to facilitate access for all hikers.

The STF (Swedish Tourism Association/Svenska Turistföreningen) is one of Sweden's largest non-profit organizations. Founded in 1885 to promote tourism in the country, it has created and marked many trails, built huts and refuges for hikers' stops. Today, the association has 58,000 members. Its motto is Känn ditt land (Know your country). The association runs more than 300 hostels and hotels, 10 mountain resorts and more than 45 cottage sites, most of which are in the countryside and are responsible for most of the trail maintenance. In addition, it manages a booking platform, organizes activities, and provides advice and services to hikers.

Friluftsrämjandet, an association whose name means "The Promotion of the Outdoor Life" founded in 1892, has more than 100,000 members, 8,000 guides and instructors with activities that focus on the youth.

Svenska Naturskyddsföreningen (SNF), the Swedish Society for Nature Conservation founded in 1909, has over 220,000 members. The Swedish Alpine Club (Svenska Fjällklubben - SFK) founded in 1927, has 1,700 members and organizes hiking and training in summer and winter for hikers.

Rescue and professional training are provided by the police, who can collaborate with volunteer mountain rescue associations, the Swedish Armed Forces, the Swedish Environmental Protection Agency, regional government agencies, the County Administrative Board, emergency services, as well as various tourist organizations and private helicopter companies.

The commercial sector of hiking

The training and certification of professional sports and tourist guides are provided by the Swedish Tourist Guide Association (SveGuide), which coordinates its qualification programs with universities in the country. Mountain guides are trained in another school in Storuman in Lapland.

These professionals also benefit from the legal guarantee so that everyone can enjoy nature and landscapes and show them to their clients. Many agencies specialized in hiking and outdoor leisure activities organize activities

in this manner. Some activities take place on private land, especially in areas belonging to large forestry companies. The principle of the organizers is "without trace", i.e., to leave the place clean after the passage.

However, with galloping urbanization and a growing need for nature, the pressure on land and the over-usage of certain nearby sensitive sites have brought new difficulties. The internationalization of tourism brings consumerist behaviors sometimes far from the Swedish philosophy, which is not compatible with the foundation of a free sharing of natural spaces. In this context, the semantic blurring is taking place. The term "nature" embodies both the wilderness, the countryside, and agricultural spaces. These elements are at the origin of potentially conflicting situations, which nevertheless concern more mechanized (ATV) and motorized (Quad, 4x4) activities than hiking.

While this right to access nature has become a tool for economic development and the promotion of outdoor activities, the challenge today is to clearly define a framework for sustainable tourism development. Because looking at international and global experiences, we find that wherever mass tourism is organized in a commodified manner, and exploitation is in the hands of commercial interests, fundamental ethical questions arise about the meaning that humanity wants to give to this world: some want to transform into a "supermarket" while others want to preserve it as a "large garden".





4.4- France



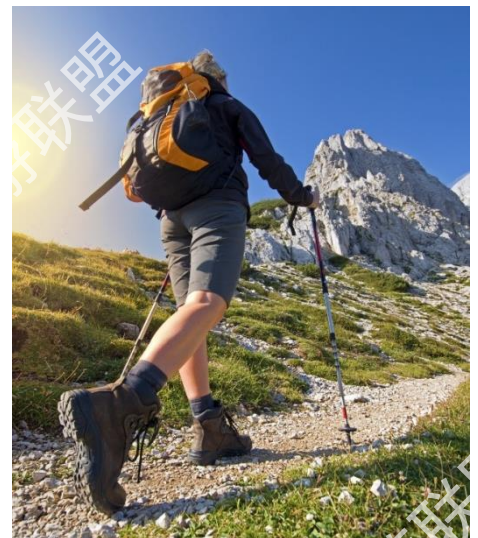
In collaboration with Valérie LECURIEUX of the French Federation of Hiking

"The paths, a shared wealth"

The legal environment for hiking

Each "department" (administrative division of the State and territorial collectivity) establishes and manages a "Departmental Plan of walking and hiking routes" (PDIPR). This is a planning tool that provides useful legal protection for the management and development of trails and routes by guaranteeing their continuity and conservation.

The pedestrian traffic of hikers or walkers is in principle carried out freely, free of charge, and equal for all. This principle applies to trails and paths in public spaces, as well as private paths where the owner has signed a passage agreement with the community or with a local organization in charge of the development of hiking. These agreements specify, among other things, the questions of responsibility and liability for any improvements, markings and maintenance done to the properties. Without this agreement, hikers cannot take private paths. In all cases, users must stay on the path and respect local regulations, the environment, the rights of residents, cleanliness, animals and public tranquility.



The rule is that the person responsible for the development, marking and maintenance of hiking routes may be held liable if it is shown that the damage occurred due to a failure in the performance of his or her duties (this risk is generally covered by civil liability insurance). Several actors may be involved in carrying out these missions: the department, other local authorities, associations, etc. Hikers are also responsible for recklessness, degradation, or bad behavior during their activities. In the end, there may be several responsible parties, in parallel or cascade.

Hiking in protected natural areas

13.5% of the national territory is classified as a protected natural area, of which 3% is strongly protected by strict control. The general public sees these areas as intended for walking and hiking. These territories are also rich in trails, marked routes and in accommodation facilities dedicated to the reception of hikers.

Unless specifically forbidden by the park's management body, hiking is open and free of charge, provided that the regulations and a code of conduct are respected and sworn guards' control that these are followed. The material and human needs to maintain the level of protection and quality of the sites are the responsibility of national and local community, but there are disputes over moderate, non-commercial entrance fees as an additional source of funding.

The public hiking industry

- The Comité National des Sentiers de Grande Randonnée was established in 1947 and later became the French Federation of Hiking (FFRP), a non-profit association recognized as being of public utility. It is delegated by the Ministry of Sports to promote hiking as a physical activity in the country. As the delegated federation for this activity, the FFRP is authorized to promulgate safety and equipment standards. It has 115 regional and departmental committees, 3500 clubs and 243,000 members including 20,000 volunteers (2020 figures) across the country.

It is responsible for maintaining the 113,000 km of marked GR® trails (labeled trails known as "Grande Randonnée") and opening new ones. It has defined three categories of itineraries: the "Grande Randonnée" trails (GR®: generally linear itinerary that crosses France, a region or a highland for several days of walking), the "Grande Randonnée de Pays" trails (GR® de Pays: smaller than the GR® and generally in a loop to explore a territory), and the "Promenade et Randonnée" trails (PR: generally made up of a loop that can be done between 1 hour and a day, often thematic or educational and allowing the discovery of the local heritage).



The FFRP assists local authorities in implementing their hiking services from the feasibility study to the animation of the network. It produces and publishes 230 guidebooks (topo-guides) of hiking trails.

It organizes and supervises hikes in all forms and for all hikers: family hikes, sports hikes, itinerant hikes, Randos-Challenges®, Randos-santé®, snowshoeing, endurance walking, Nordic walking, aquatic walking, events, and hiking education operations in schools. It also provides training for hikers, markers, and association leaders.

FFRP establishes charters, regulations, and development techniques for hiking, however, local communities and clubs are not obliged to join the FFRP or to follow its development standards (except for trails labeled as "Grande Randonnée").

- In addition, among the many associations in this field, the National Union of Outdoor Centers (UCPA), also recognized as a public utility, was founded in 1965 by the State to promote physical outdoor activities, particularly among middle-class youth. Its project is humanistic, social, and civic, and is an extension of public services. Hiking is a central practice in the 80 or so outdoor disciplines developed by UCPA.
- However, the most common way of practicing hiking for recreation and sport for residents as well as for tourist discovery hiking for visitors coming from elsewhere is the free or self-managed hiking, in other words in autonomy/without any form of supervision by a guide. The public is free to come and go as they please on the country's paths and trails.

The commercial sector of hiking

- The professional supervision of hikes provided by the mid-mountain guides (AMM) (refer to P1 - Chapter 10) is remunerated. The mid-mountain guides (AMM) hold a state diploma of mountaineering - medium mountain guide certificate (DEAAMM) issued by the national public institution of the Ministry of Sports: The "National Center for Nordic Skiing and Mid-Mountain Activities", which depends on the National School of Mountain Sports in Chamonix (ENSM). The mid-mountain guides (AMM) work in all regions, mountainous or not, and can even guide "clients" on overseas trails. They are grouped together within the National Union of Mountain Guides which represents them.

- There are many tour operators and other hiking and trekking organizers who offer "all-inclusive" products and recruit mid-mountain guides (AMM), such as Terres d'Aventure, Allibert Trekking, Nomade, Atalante, Huwans, and La Balaguère.
- The hiking market includes a vast array of paid services, directly and indirectly related to activities and trails (shops, accommodation, restaurants, travel, luggage transport, parking, equipment, etc.).

(Source: French Hiking Federation)





4.5- Serbia



In collaboration with Boris MIRC, President of the European Ramblers Association

"Walk to better enjoy the generous nature in the heart of the Balkans"

Introduction

In Serbia, as in most of the Balkan countries, there is an organization that covers mountaineering and walking (hiking). The same is true for Cyprus, Spain, Portugal, and more or less all of southern Europe.

The Mountaineering Association of Serbia (MAS) was founded in 1948 as a successor to the Serbian Mountain Society (founded in 1901). Serbia is not a "high mountain" territory, and the highest peak in Serbia is just over 2500 m high.



The history of hiking

During the socialist period (1945 - 1990), access to nature was totally free, as there were no private landowners, except for a few small plots. In fact, during this period, many trails were created without any particular constraint, and the trail network was not regulated.

With the formation of national parks (the highest level of protected areas) and the introduction of certain rules and laws, limitations were put in place. With the restitution of land after the disappearance of socialism, new private owners of the land influenced the decisions of right of way for trails. In this context, the continuity of use of existing trails and the construction of new ones were subject to the approval of landowners and custodians of state property (parks, forestry administrations, etc.)

Types of Trails

Most trails are short: from a few hours to two days at most.

However, there are also a few dozen long-distance trails named "cross-country trails", which can be more than 200 km long. These trails are principal trails dedicated to geographical themes (linking different highlands or landscapes), cultural trails (linking numerous monasteries) or historical routes.



Their number varies from 20 to 40 depending on the maintenance capacity of the trail. Their condition is checked every five years by the local association and their volunteers.

The crossing of Serbia is part of two E-Paths (trails marked by the European Ramblers' Association): the "E4" of 1,500 km and the "E7" of 2,000 km.

Management of trails and hiking

The trails must be registered in the central register managed and directed by the Mountaineering Association of Serbia (MAS), where each trail is given a number according to its geographical affiliation. The founders of the trails are local clubs who operate and maintain themselves. These clubs are sometimes partially supported by the Mountaineering Association of Serbia (MAS) or by the local community. The rules for marking trails are established at the national level by the Mountaineering Association of Serbia (MAS).







4.6- Nepal



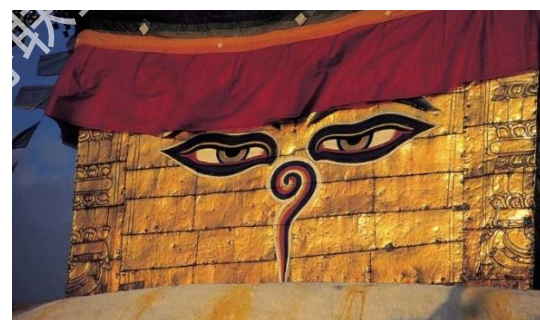
In collaboration with Awadhesh K DAS, Member of the Nepal Tourism Board

"Nepal – All hikers' dream"

The legal environment for hiking

On the southern slopes of the Himalayas where the monsoon climate makes it difficult to build roads, the trail is at the same time a trade and daily travel route for local people, as well as a pilgrimage route and hiking for tourists.

Most trails and paths in Nepal are open to the Free Individual Trekker (FIT), either individually or in unaccompanied groups. However, in some areas, access to trails (including those for trekking) is highly regulated by the government. Trekking in these areas is allowed if you have obtained a permit in Kathmandu. Only registered trekking agencies can help trekkers apply for these permits at the Department of Immigration. Trekkers should be trekking in groups (of at least two people) accompanied by a licensed trekking guide.



There are 15 regulated areas, and the fees for hiking permits ranges from an expensive US\$500 for 10 days (and US\$50 for each additional day) to a cheaper US\$10 a week. Moreover, trekkers should trek only in the specified or designated route as per the Trekking Permit. They are not allowed to change routes, nor is the trekking agency/trekking guide accompanying the group allowed to change the planned route. Trekking groups should strictly adhere to local regulations and are required to respect local customs and traditions. They must not indulge in any activity "that goes against the established norms and culture of the society."

Since January 1, 2008, all foreign visitors wishing to trek in different regions of Nepal must carry a Trekkers' Information Management System (TIMS) card. This passport for free trekking can be issued either by a trekking agency on behalf of the applicant or directly by the Department of Tourism in Kathmandu. Since April 1, 2010, the fees for obtaining a TIMS card are US\$10/person for those who do a trek with an agency, and US\$20/person for those who do an independent trek.

Hiking in protected natural areas

In addition to the TIM and any special permits for regulated areas, there is also a fee for the entrance of parks and nature reserves, national and protected parks, etc. This entrance fee is to be paid either in Kathmandu at the Department of Tourism before leaving, or at the entrance of the park (in which case there is usually an additional fee).

Fares vary by destination and nationality: fees are always higher for foreigners than for Nepalese and citizens of member countries of the South Asian Regional Cooperation (SAARC). The entrance fees for the 11 national parks, the four conservation areas, the wildlife reserve and the hunting reserve are as follows:

- 100 to 150 rupees (from US\$0.86 to \$1.3) for Nepalese adults;
- 500 to 1500 rupees (from US\$5 to \$13) for SAARC adults;
- 500 to 3000 rupees (from US\$9 to \$26) for foreign adults.

The trekking sector for Nepalese

Nepalese living in the countryside walks daily for work or on pilgrimage. Nepal's ancient cultures and traditions, still deeply rooted, coupled with scenery, are the main assets of tourism success.

The standard of living, including the GDP per capita, is low, so the tourist and recreational activities are reserved for the many foreigners who come to visit the country. Thus, the jobs associated with trekking, such as guides, porters, cooks, etc., have developed greatly. Training courses were established in 1979 under the Nepal Mountaineering Association (NMA) in cooperation with the Slovenian Alpine Club and a mountain guide training school was founded in Manang. France, with the Ecole Nationale de Ski et d'Alpinisme (ENSA) located in Chamonix, became a major partner of the NMA in the design of mountaineering training programs for Nepalese guides and local instructors from the 1980s and onwards. The Nepal Mountaineering Instructor Association (NMIA) was created. The first Nepalese mountain guide was certified to international standards in 2008. The Nepal National Mountain Guide Association (NNMGA) was established in the same period and represents Nepal in the International Federation of Mountain Guides Associations (IFMGA).



Most trekking guides (non-alpinists) are licensed after one month of training course in accordance with the Nepalese standards implemented by the government. They are grouped in the Trekking Guide Association of Nepal. TGAN advocates for the requirement to have a Nepalese guide for all foreign trekkers on Himalayan trails to better control the rules related to safety and the environment, and to optimize the economic development in their mountains.

Besides the mountain guide training, a test training program for "Mountain Leader" (refer to P1 - Chapter 10) in accordance with international standards, was conducted in 2017 by NMA with the support of the International Climbing and Mountaineering Federation (UIAA - of which NMA is a member). The Nepal Mountain Leader Association (NMLA) was founded to bring together the future International Mountain Leaders (IML) diploma holders and to be affiliated with the relevant global body, i.e., the Union of International Mountain Leader Associations (UIMLA). The assessment of the training and the certification by the Technical Commission of UIMLA are currently underway.

The Nepal Rescue Association (NRA) was founded in 1973 to carry out mountain rescue operations. These operations are usually carried out under its guidance and include the involvement of private helicopters and the army, as well as trekking and expedition agencies operating in the mountain tourism market.

The commercial hiking sectors

Tourism is a major cornerstone of Nepal's economy, having contributed to providing prosperity and peace for half a century. No system for organizing these benefits has been put in place, but the distribution of resources has the advantage of being done directly with local communities, which has largely contributed to improving the living conditions of communities in mountainous regions.

Among the 11 million foreign tourists who entering Nepal in 2019, 25% came for trekking or mountaineering, 15% for pilgrimage, and 50% for visiting cultural sites and national parks. The average expenditure was US\$48/tourist/day. Finally, the famous regions of Annapurna, Khumbu, Mustang, Langtang and Manaslu alone account for 95% of the trekkers.



There are 2600 local trekking agencies with licenses issued by the Ministry of Tourism, Culture and Civil Aviation and that are taking advantage of this trekking "windfall". Most of them joined the Trekking Agencies Association

of Nepal (TAAN), which promotes the development of a tourism business that generates social and economic benefits for the people in these communities. A project launched in 2019 aims to improve the service quality and diffusion of tourism and infrastructure towards a more benign and sustainable tourism industry, to improve the employees' and all trekking workers' rights, to contribute to providing more efficient means of transport for trekking departures and returns, and to further participate in rescue operations for trekkers or populations affected by natural disasters. TAAN also wishes to become involved in professionalizing programs for the range of different jobs required by the trekking sector (group leaders, cooks, assistants, interpreters, etc.). Including field actions for the environment (reforestation, cleaning of sites, etc.).

Among the missions set by the association are the research and construction of new trails to expand their offer, the implementation of a trail maintenance service, the improvement of bridge conditions, the creation of shelters for porters, and a willingness to help the government to better regulate hiking practices. Like the Trekking Guide Association of Nepal (TGAN), TAAN advocates that all trekkers should have at least one Nepalese sherpa (guide or porter), which is officially registered with the government.

Its action plan makes it one of the leading players in the trekking market in Nepal. At this stage, however, it is a plan of intention. Like all other associations in the sector, it is looking for financial partners so that it can do in-depth work to better build and manage this market in the future. This momentum has been temporarily strained by the Covid-19 health crisis, which has caused the loss of nearly 90% of the tourism revenues expected to be generated in 2020.



(Sources: Nepal_tourism_statics.pdf; BTB Nepal Tourism Board; The Himalayan, NMA, UIAGM, UIMLA)



4.7- Peru



In collaboration with Roger M. VALENCIA, former Minister of Tourism and former Minister of Culture of Peru

"Hiking in the land where myth and present merge"

The Andes, the longest mountain range in the world, is the most important geographical feature of Peru. This mountain range has created a complicated network of various terrain, from the driest place on the planet to lush Amazon jungle, deep canyons and steep mountains, with high plateaus and narrow valleys.

One of the most important contributions of the Andean cultural process to the world today has been the capacity to control the landscape, organize the territory and generate added value to be reinvested in the growing population. Large scale irrigation systems, millions of hectares of terraces, reforestation and new agricultural technologies of the floodplains have been realized.

In order to control the difficult terrain and to integrate the different ecological niches in which they lived, the Andeans developed a collective society with reciprocity and common purpose as their core values. This organized society was able to build the most complex and extensive system of paths called CAPAC ÑAN, of which approximately 30,000 kilometers still exist today.

Legal framework of hiking

The main Inca trail is inscribed on the 2014 UNESCO World Heritage List: "Qhapaq Ñan, Andean Road System" (**Argentina, Bolivia, Chile, Colombia, Ecuador and Peru**) to ensure the effective protection and conservation of the network's outstanding universal value ([Qhapaq Ñan, Andean Road System - Documents - UNESCO World Heritage Centre](#))

On most of the trail system, hiking is free of charge as many Andeans, Peruvians and foreigners use it daily in various parts of their country.



Hiking in protected natural and cultural areas

When the Qapac Ñan roads cross a natural reserve, as in the Huascarán National Park in northern Peru, or in the reserved area of Nor Cochabambas Yauyos, SERNAMP, the park managing agency under the authority of the Ministry of Environment, charges an entrance fee for visitors, to maintain and protect the trails.

20% of the territory belongs to areas: 11 national reserves, 5 national parks, 5 national sanctuaries. The entrance fee ranges from US\$3 to US\$8 for foreign adults, US\$3 to US\$4 for Peruvians, and US\$1 to US\$2 for locals.

The same practice is followed by the Ministry of Culture, in the cultural reserves like the historical sanctuary of Machu Picchu or the regional reserve of Choquekiraw, some of the most famous sections of the Inca route. Nowadays, more than 129,000 visitors per year are traveling in these areas. Therefore, it is mandatory to make

a reservation with a given arrival time and limited validity on (<https://www.machupicchu.gob.pe/>) .

The local communities and municipalities carry out maintenance works of the other sections of the Qapac Ñan and other trails, where there are no entrance fees. This is the case for most trails.

Only in protected areas do hikers need a guide to help explain the area. Being a guide is a profession that is constantly becoming more professional, for example on the Inca Trail of the Machu Picchu Sanctuary, the hiking activity must be organized in groups, the camping areas are designated, and each group must be accompanied by a certified guide.

Schools and colleges of higher education both offer specialization in culture and nature and can issue a guide certification, and applicants can choose 3 to 5 years of vocational training.

In 2012, Peru was also the first South American country to join the Union International Mountain Leader Associations (UIMLA), which brings together associations of mountain guides certified by international standards. The curriculum was implemented in the cooperation framework with Switzerland with the creation of a training center in Huaraz and the "Asociación de Guías Oficiales de Caminata del Perú" (AGOCP). Today it consists of about fifty certified Mountain Leader ([refer to: P1 - Chapter 10](#)).

More than 15,000 Peruvians are certified trekking guides specialized in different fields, such as culture, nature, or mountains. However, most of them work in information services and, of course, as cooks, llama and mule or horse breeders, supporting the trail operations.

The cost of providing a guide for a group on the Inca Trail varies according to the number of hikers and the guide's quality and experience, ranging from about US\$60 to US\$200/day.



The pilgrimage to "Qoylluriti"

Myriads of pilgrims in traditional clothing begin their walk from the trailhead at Mahuallane and travel to the Sinaqara camp where they dance all night to traditional music. Before sunrise, each indigenous nation carrying its own flag, climbs the glacier to perform a pre-Hispanic ritual to celebrate the beginning of the Andean year. Afterwards, the pilgrims walk a 40 km long path, walking all afternoon and the following night under the full moon to reach the chapel of Tayancani. From there, they observe the sunrise on the sacred mountain "APU Ausangate" whose waters feed the valleys and the population of the Cusco Basin.



The pilgrim-walkers of "Qoylluriti" gather in front of the sacred mountain of "APU Ausangate."

Hiking by the locals

Some 6 million people in Peru hike in their daily life (walking to school, to the market, to the fields, etc.). More than one million people in Peru hike for recreational purposes, mainly visiting natural and cultural reserves. In addition, hundreds of thousands of Peruvians participate in ritual pilgrimages.

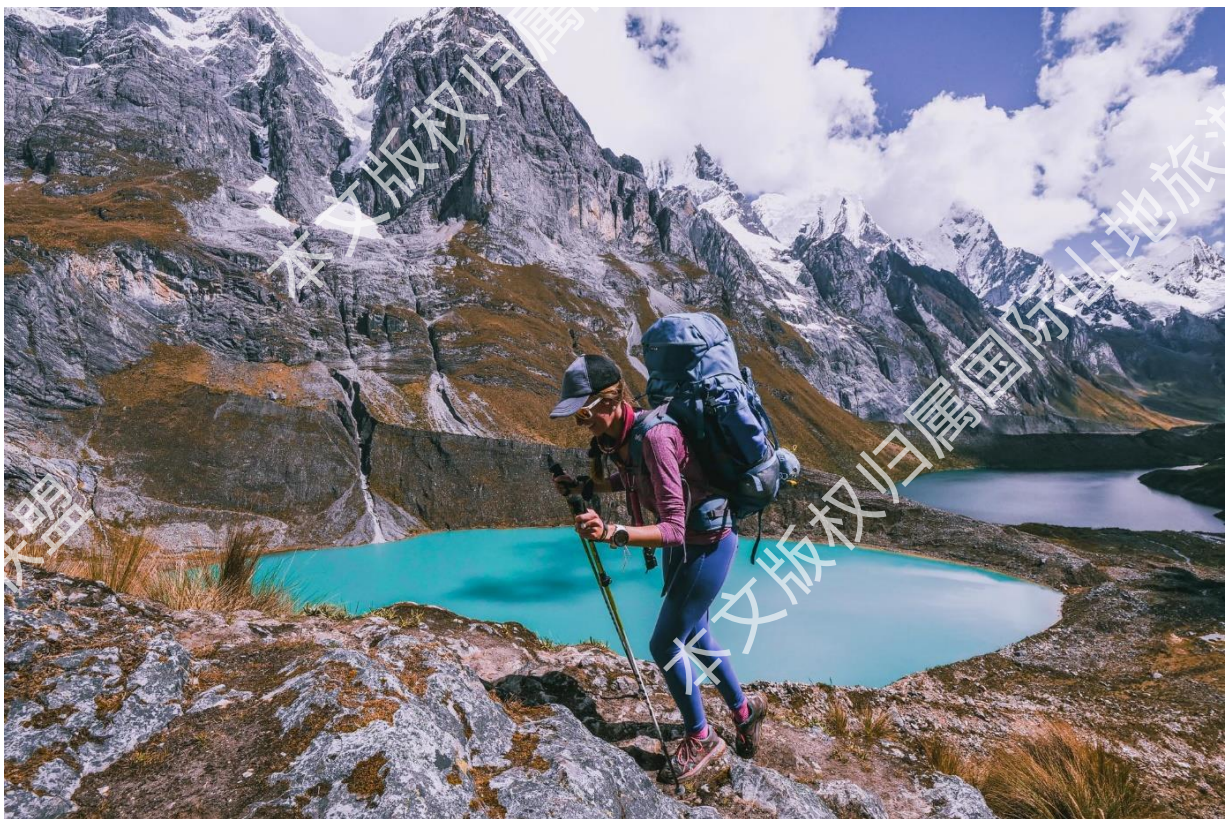
The hiking/trekking market

Tourism has been constantly developing within the Peruvian economy and in 2019, 4.5 million international tourists visited the country. This accounts for 3.9% of Peru's GDP and an additional 3% is generated by domestic tourism. The hotel and travel industry in Peru accounts for 6.9% of the country's economy. International tourism in Peru in 2019 amounted to US\$5300 million.

"Active tourism" is an important source of income, especially for international tourism. Most visits to monuments and sites of interest are done by hiking, and nearly half a million visitors participate in multi-day trekking activities, especially in the mountainous protected natural areas.

On average, an international tourist in Peru spends between US\$130 and \$150 per day. This expenditure benefits a large number of tour operators and travel agents in the country and as they generally offer walking tours, the majority of them also sell hiking products. The Cusco Chamber for Regional Tourism (CARTUC) represents some of the most professional operators in the field, with 35 specialized trekking operators.

Tourism is widely considered as a tool to integrate the traditional Andean and Amazonian economies into the most modern sectors of our economy, emphasizing the respect for the culture, values and distinctive qualities of the people, and other values associated with the practice of responsible tourism. These trails are, therefore, an excellent medium.





4.8- Madagascar



In collaboration with Laurent BOIVÉAU, specialist of the Himalayas and lover of Madagascar, www.tekeness.fr/

"Hiking in the island country"

The legal environment for hiking

Madagascar has no specific legislation on hiking, but the territory offers two very different organization options: the national parks and the rest of the country.

Protected areas account for about 10% of the total area of the country. There are 122 protected areas that are classified as protected areas, national parks, special reserves, and strict nature reserves. The State (Ministry of Tourism) is in charge of the management and implement regulations for the activities in these areas:

- An entrance fee (from US\$12 to \$18 for adults, depending on the park)
- Mandatory local services in all parks for trekkers: porters, Malagasy guides, cook, etc.
- Designated primitive camping sites for multi-day trips;
- A hiking itinerary established in advance, and which cannot be changed during the trip;



As for the rest of the country, i.e., 90% of the total area (a territory larger than the area of Sichuan Province), hiking and trekking are subject to "customary laws." These "customary laws" stem from traditional and common customs constitutes a real source of law. Moreover, it is necessary to:

- Request permission from the village chief to cross the trails in his area of influence, explaining the reason for walking across this area;
- Making (sometimes) an offering to ask for a welcome from the ancestor spirits;
- (Usually) spend some time with the local authorities to discuss and share your motivations;
- In some areas where there is still "Dahalos," i.e., zebu cattle thieves, it is preferable, if not imperative, to send an emissary to meet with the village authorities beforehand to inform them about the arrival of the trekking group...

Hiking in protected natural spaces (National Parks)

Over the years, residents have realized the need to protect nature (no longer allowing cattle to graze in these protected areas or using the uncontrolled slash and burn method to promote regrowth, etc.).



This development makes it easier to include these areas in the management of tourist activities, and a portion of the financial income from the parks is distributed among the nearby villages. This principle is not systematically respected, and it has happened that villagers directly charge fees for tourists and hikers upon their arrival at the park.

The commercial sector of hiking

Trekking accounts only for a tiny part of tourism in general in this country, even though there are immensely rich natural resources to be explored. The State gives priority to investing in the mass tourism economy oriented towards stays in seaside resorts with large accommodations.

To become a local trekking guide, candidates must go through the usual training process, from porter to tracker, then guide, a training process that can last for years. The fact that there is no formal training, just born in the capital and can speak a foreign language opens the door to the job.

The hiking sector has great potential within the country. From the North to the South and between the two coasts, the geographical and ethnological variety brings additional trekking offers to complete the already existing ones proposed by numerous specialized agencies on an international scale. However, the area is still a special and adventurous tour reserved for enthusiastic hikers who are willing to discover this island's natural resources while walking and meeting the locals.







4.9- Other sites with other management models

National regulations and organizations for hiking and access to the crossed lands set the general framework for the activity.

However, the rules and the management model for such activities and trails may differ from one region to another, or according to the level of protection and status of the crossed lands.

EXAMPLE OF PRIVATELY MANAGED HIKING TRAILS CROSSING PRIVATE PARCELS AND PROTECTED NATURAL AREAS



MANAGEMENT OF THE BANKS PENINSULA TRACK (NEW ZEALAND)

The Banks Peninsula Track is managed by a private operator. It was during the local economic downturn in the 1980s that a group of farmers and local landowners joined together to create a private trail management and eco-tourism company, "Banks Peninsula Track" to diversify their income by operating nature and hiking tours through their lands.

The entrance, the use of the trail and services such as accommodations/catering/guides are charged. The group size of independent or guided hikers is limited to 12 people. The number of hikers is limited so as to preserve nature and to ensure a high-end immersion experience.

A portion of the revenue is reinvested in trail maintenance, facilities and services. The shareholder-owners are responsible for the maintenance and development, and their decision-making process is based on consensus.

Banks Peninsula Track has a concession to allow the trail to crisscross sensitive natural areas that are not open to the general public and managed by the Department of Conservation (DOC).

The ecotourism offer of the Peninsula Track is the following:

- Walking tracks from a few hours to several days;
- Relaxing stays, walks in the forest, on the coast or the volcano;
- Discoveries of a rich and protected flora and fauna;
- Participatory tourism products with farm activities and ecological conservation activities.

This offer has become one of the most successful products of its kind in New Zealand, with an annual turnover of several million US dollars.

(Sources: www.bankstrack.co.nz)



EXAMPLE OF A HIKING TRAIL CROSSING MANY REGIONS AND LANDS OF DIFFERENT STATUS THAT IS MANAGED BY A PARTNERSHIP



MANAGEMENT OF THE BIBBULMUN TRACK (AUSTRALIA)

The Bibbulmun Track is a popular long-distance walk trail in Western Australia, stretching from Kalamunda in the eastern parts of Perth to Albany: 1003 kilometers long, with 58 connected local sections.

The Bibbulmun Track Foundation is a non-profit community organization whose mission is to manage the trail, including maintenance, promotion and marketing. Its goal is to ensure the sustainability, attractiveness and high quality standards of the trail. It sells maps to users, provides hiking guides, offers trip-planning advice, rents out equipment and organizes orientation and primitive camping cooking courses.

The Foundation is an example of a co-management model for a hiking trail. Its partner is the Western Australian Parks and Wildlife Service of the Department of Biodiversity, Conservation and Attraction's Parks. It has many members and the volunteers are in charge of the maintenance of the trail sections. It attracts numerous grants, donations, and fundraising events generated by the many guided activities and events supported on the trail.

The hiking trails are open and free to all. Even the use of the primitive camping areas is free. Commercialization is carried out through the sale of services offered by the foundation, the local communities (lodging, shops, catering, cabs, etc.), the hiking guides (guidance and security) and the tour operators (supervised organizations and "all-inclusive" stays).

(sources : www.bibbulmuntrack.org.au)



EXAMPLE OF A HIKING TRAIL MANAGED BY THE STATE

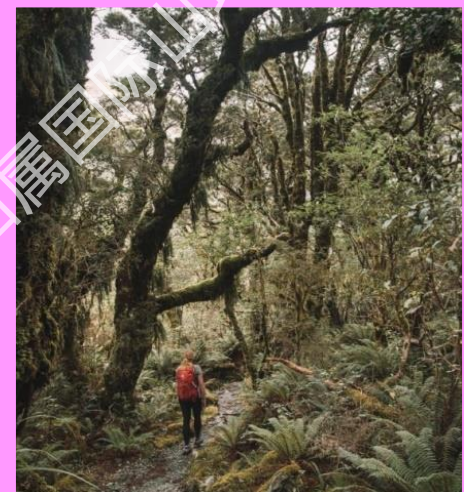


MANAGEMENT OF THE MILFORD TRACK (NEW ZEALAND)

This is the country's most famous hiking walk, a 55 km one-way trail in the Fiordland National Park. It is an example of a management model where the trail is operated by a state agency: the New Zealand Department of Conservation (DOC).

This agency is responsible for all maintenance, promotion and development of the trail and the entire park. No volunteers or community groups are involved in the park management.

Hiking can be done freely but reservations are required. Accommodation is provided in three huts and lodges along the trail, with overnight accommodations being more expensive for tourist hikers than for New Zealanders. The annual number of visitors for the trail is around 120,000 hikers.



Ultimate Hikes is the only commercially licensed specialist operator for the Milford Track, providing assistance to tourists who do not want to organize their hiking trail themselves. Ultimate Hikes is also the only commercial provider for another renowned trail in the same park, the Routeburn Track.

A substantial portion of Ultimate Hikes' license fees is spent on trail maintenance.

(Sources: <https://www.ultimatehikes.co.nz/>)





©Jules Pijourlet: volunteers working on the repair of water drainage pipes on the trails of the Tour du Mont Blanc (France)



©Association Club Vosgien (the Vosges Club) team of volunteers working on a trail in the Ventron Reserve in the Vosges (France 2019)

4.10- Management and volunteers: a very successful partnership

Considering the cost of trail construction and maintenance, except for fee-paying trails and sites that are operated from a merely commercial and tourist perspective, volunteering is an essential partnership to maintain high-quality trails and open to all in most countries with a hiking culture. It is also the best testimony of the community's ownership over the common good of the trails.

Various trail costs

Construction

- The 310 km road upgrading project in the Saintonge plain in southwest France costs €27,000, or €87 per km;
- The cost of upgrading and construction work of a 360 km trail in the mountainous and remote areas of the Southern Alps on the border between Italy and France was €130,000 or €353 per km...

(Source: LEADER European Observatory)

Maintenance

Switzerland evaluates the maintenance work on its 65,000 km trail network at the equivalent of US\$50 million/year (including the estimated value of volunteer labor), or US\$900 per km...

(Source: Swiss Hiking Trail Federation)

EXAMPLE OF VOLUNTEER INVOLVEMENT'S IMPACT

TRAIL VOLUNTEERING IN THE USA

During 2012, the "Forest Service" recorded 1.2 million volunteer hours on the many trails under its administration, this was valued at US\$26 million (source: 2013 report of the US Government Accountability Office).

In 2014, a report on cooperation with the national trail system found the same situation: volunteers from non-profit organizations associated with national scenic and historic trails contributed altogether over one million volunteer hours; a dedication that is valued at nearly US\$24 million!

The American Hiking Society (AHS) reported that for trails that were maintained and built with its financial support, 63% of the work was done by volunteers, 15% by paid staff, 11% by government employees, 7% by student organizations, and 4% by other types of workers. Each year AHS organizes more than 50 participatory volunteer vacation programs in locations across America. For example, in 2014, 478 American volunteers took part in 48 trips in 23 states and the US Virgin Islands. These volunteers contributed over 19,000 hours of trail work worth more than US\$431,000.

21,800 volunteers participated in the 2014 National Trails Day® supported by the American Hiking Society, to work on 439 trail projects. The work provided by the volunteers had an estimated value of US\$2.3 million.





KEY POINTS TO REMEMBER





INTER-TERRITORY TRAILS

European Ramblers Association

5

Hiking in Europe is a prime example and deserves to be considered. It was in Germany in the 19th century that the first policy for structuring recreational and tourist hiking appeared.

This quest for evasion, for the discovery of historical and natural heritage led to the birth of clubs, which began to create and maintain trails. The world was less connected at the time, except for a few major pilgrimage routes that crossed multiple countries. Both trail builders and hikers remained generally self-centered in their own lands.

The World War II catalyzed a popular desire for reconciliation, exchanges and meetings between peoples, and the demand for nature and walking trails increased. From then on, national and regional trails were developed, and itineraries to be taken "on foot" became more popular across Europe. The "crazy idea" of creating an international confederation of the continent was born and eight hiking associations from five countries (Germany, France, Switzerland, Belgium and Luxembourg) became its "founding fathers".

Germany, who had been responsible for the outbreak of the war, actively tried to make hiking the vector of peace on the continent and in 1969, a European Federation was founded in the mountains of the southwest of the country, an old land with deep hiking traditions, near the city of Stuttgart. The first president, Dr. Georg Fahrbach, said in his remarkable founding speech: *"We, hikers, for whom nature and landscape do not stop at borders or continents, must be convinced representatives of the opinion that all people are equal and that we are all equal citizens of the community of humanity."*

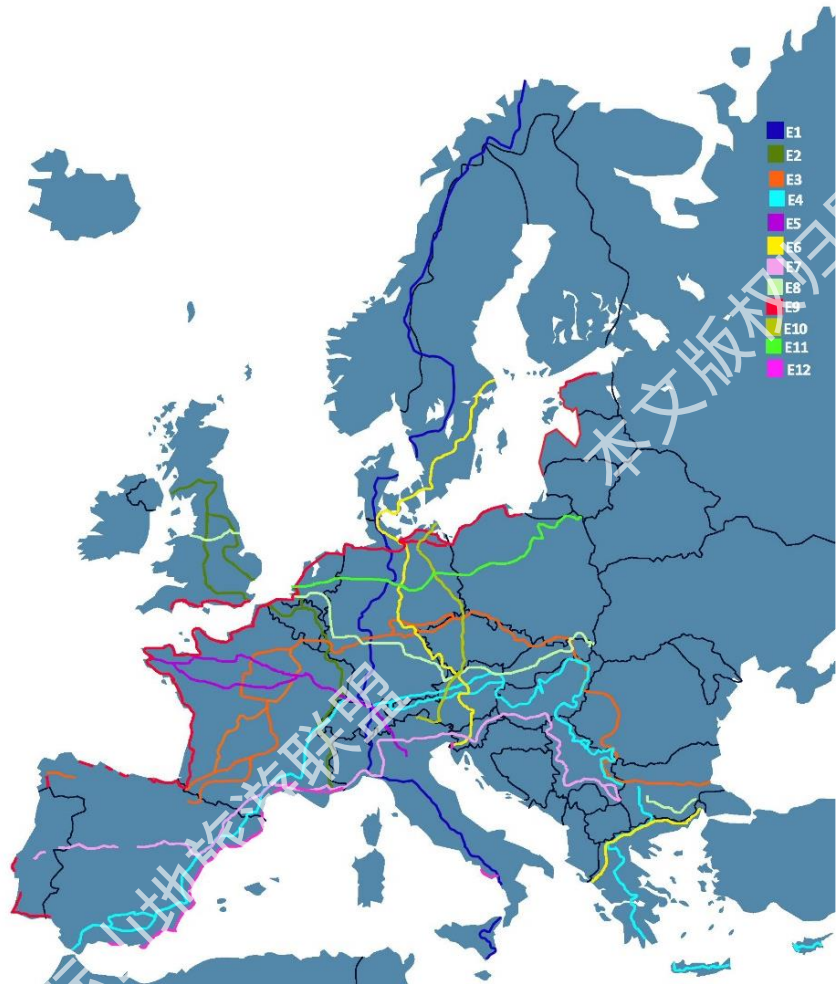
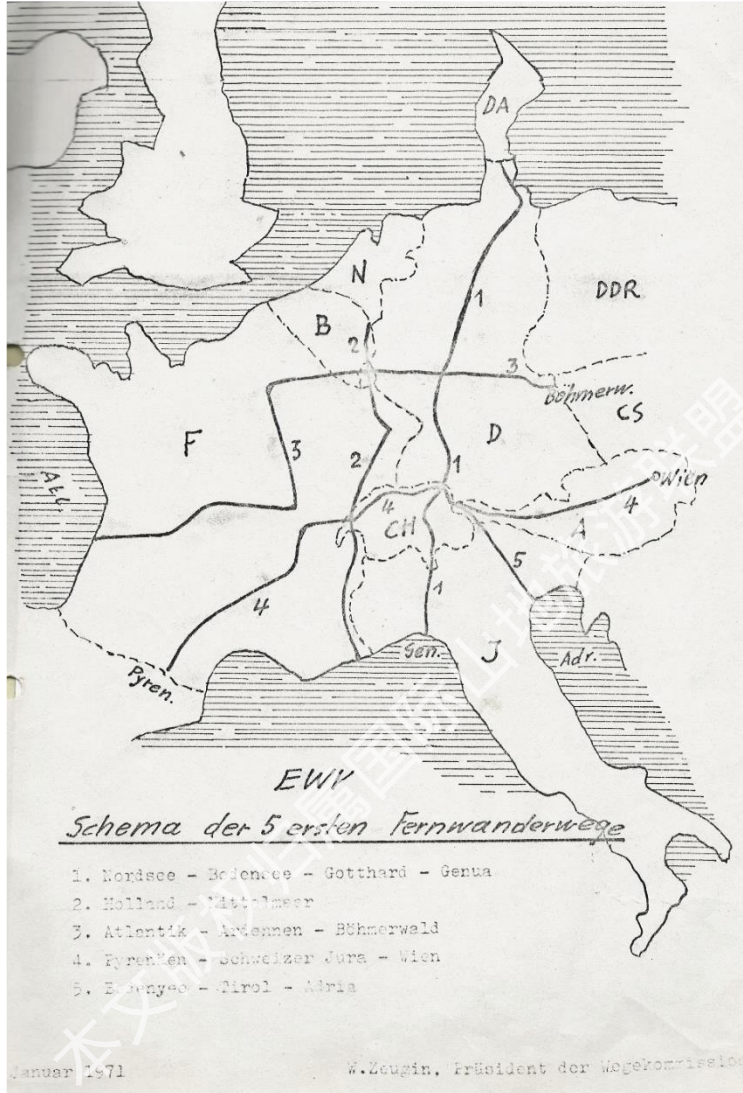
The European Ramblers Association (ERA), in English, and Europäische Wandervereinigung (EWV) in German, Fédération Européenne de Randonnée Pédestre (FERP) in French, brings together 65 national and regional organizations from 35 countries.

CHAPTER SUMMARY

- 5.1 50 years of history to bring together 65 organizations in 35 countries
- 5.2 "E12": the Mediterranean trail
- 5.3 The "EuroRandos" of the year 2000
- 5.4 The label "Leading Quality Trail Best of Europe"

Left: The first 5 E-Paths in 1971

Right: the 12 E-Paths in 2021



5.1- 50 years of history to bring together 65 organizations in 35 countries



In collaboration with Armand DUCORNET, Vice-President

At the beginning, it was a question of bringing together enthusiasts from all over Europe to talk about trails that cross borders, and, as a natural consequence, a confederation was established to coordinate this ambition. An "international trails commission" was founded to concretize and promote the project.

In addition to the creation of a network of paths, the challenge was also educational and political:

- To promote a healthy lifestyle through walking, free access to nature, responsible and environmentally friendly behavior;
- To develop knowledge of the History of Europe and its natural and cultural heritage;
- To promote the understanding of people of all countries through extensive cross-border cooperation.

For such a project to work, it was necessary to move towards a network of open trails and routes with easy circulation for hikers. One of the objectives was to soften the regulatory procedures concerning passports and customs from the respective authorities, which was seen as a very utopian concept at the time.

The clubs and associations of different countries brought their valuable and abundant experiences (some of them already existed for more than 100 years) to create favorable conditions to facilitate the activity of hiking (marking, maintenance of trails, lodging, events, etc.).

It is on these bases of a vast sharing and consultation that the project will be gradually implemented. Here are the main steps:



Stage 1: 1970

First, we had to speak the same language. Trail or route? Together, the parties sat down to define certain terms:

- Trail: the foundation of the activity, the ground on which people hike. It is the property of private individuals, communities, or even the State;
- Route: the itinerary imagined by a designer, of a pedestrian journey on trails, drawn on a map, marked on the ground and open to all hikers.

Preliminary planning has been carried out, and the network of five international routes has been drawn on the map. Germany, the driving force behind the project, then began to speak of "E-Wege" in its language, "E-paths" in English. The main principles were established:

- The routes follow the beautiful hiking trails that already exist in the region and the country;
- It is planned that a European identification will mark out the routes to guide the hikers. These markings should be placed on remarkable places;
- The place names indicated on these signs must be written in the local language;
- The installation of the markings and the maintenance of the trails will be the responsibility of the countries and regions where a route is located.

Stage 2: 1972

The priority routes are collectively determined. Two were selected, validated and implemented:

The E-Path 1, which aims to link **Norway** and **Italy** through **Sweden**, **Denmark**, **Germany** and

- **Switzerland** (a total distance of 4960 km once finalized);
- The E-Path 5, which will cross **France**, **Switzerland**, **Austria** and **Italy** (a total distance of 3050 km once finalized).

These two E-Paths intersect at the city of Konstanz in **Germany**, from where the implementation of the two E-Paths will start: E-Path 5 going east and west and E-Path 1 going north and south.

At this stage, it was only an intellectual concept, and the construction of the paths would start the next year. An international brochure was published; in it, President Fahrbach wrote: "*The hike is a light, but a solid bridge that connect people...*"

In his statement, which is still remembered and has lost none of their topicality beyond the years, he said: "*... the network of routes in this project are, of course, essentially of symbolic value. We are not naive enough to imagine that people will now hike from the Mediterranean in southern **Italy** to the North Sea in **Denmark** or even the Arctic Ocean in **Russia**, or from the Pyrenees in **Spain** to the Vienna Woods in **Austria**. But the link is now created. Moreover, these long-distance routes can be walked in partial sections, which in no way compromises their value as a connection between people.*"

Stage 3: 1973

The work on E-Path 1 and E-Path 5 launched in Konstanz was progressing towards the four cardinal points. The European Federation launched its promotional slogan throughout the continent: "*Understanding and friendship between people and healthy leisure through hiking remain the guiding concept in our society.*"

Stage 4: 1974

The first "guide-book" is published for walkers, describing the then almost completed E-Path 5. This booklet provides details that all those who want to walk it partially or entirely need to know.

Stage 5: 1975

At that time, the promotion of this hiking service to the public, clubs and tourism operators had begun to have an effect. The trails were being used by long-distance hikers attracted by the dream of "Europe on foot". But there was still much to be done on the ground, in particular, the lack of marking led to numerous complaints from travelers. This did, however, prove that there was a popular interest and that many people were using the trails.

In order to improve this, channel efforts and resources, and avoid a dispersion of initiatives among the numerous proposals that were sent to the Federation, the commission, including its international representatives, decided to limit itself to the finalization and implementation of the first six routes of the planning before taking on new projects. These six itineraries were:

- The E-Path 1, in progress;
- The E-Path 2, which would go through Ireland, England, the Netherlands, Belgium, Luxembourg, Switzerland, France (with a total distance of 4,850 km once finalized);
- The E-Path 3, would go through Spain, France, Luxembourg, Belgium, Germany, Czech Republic, Poland, Slovakia, Hungary, Romania, Bulgaria, and Turkey (with a total distance of 6,950 km once finalized);
- The E-Path 4, which would go through Spain, France, Switzerland, Germany, Austria, Hungary, Romania, Bulgaria, Greece, and Cyprus (with a total distance of 10,450 km once finalized);
- The E-Path 5, in progress;
- The E-Path 6, which would go through Finland, Sweden, Denmark, Germany, Austria, Slovenia, and Greece (with a total distance of 5,200 km once finalized).

Due to the participation of volunteers from local clubs and associations in different countries and regions, the route will be gradually established, not all of whom were necessarily members of ERA-EWV-FERP. The latter was trying to orchestrate this dynamic on a continental scale.

In the mountainous parts of the Alps, the European Federation gave up taking care of certain sections in steep terrain, leaving them to the responsibility of the local Alpine Clubs which were more competent in this field, as it was necessary to avoid attracting inexperienced hikers for safety reasons. The local clubs did not always welcome a European "tutelage". Nevertheless, the ERA-EWV-FERP and the Alpine Clubs still collaborated closely.

Stage 6: 1979

A common marking system, while also respecting the local ways of markings, became a necessity. The E-Paths would henceforth be officially identified by the letter "E" (for Europe), followed by their number. This ID is then indicated along the paths concerned in addition to traditional local markings. This concept is still valid today even though many regional markings that differ from one another make the task of standardization more complicated.

Stage 7: 1981

At that time, the "Iron Curtain" would still separate Western and Eastern Europe for another 10 years. This hermetic border was an obstacle to the implementation of the planned trails that were to pass through the closed countries attached to the USSR. However, the diplomatic interventions of ERA-EWV-FERP made it possible to connect trails from **Yugoslavia** to **Italy** and **Austria**.

Stage 8: 1982

The E-Paths pass through 18 member countries and 10 non-member countries. **Hungary** in Eastern Europe opens its trails as an extension of the "E4" trail thanks to the local club "Nature Friends". In 1984, **Czechoslovakia** followed in **Hungary's** footsteps.

Stage 9: 1989

Eastern Europe opens to the West, allowing ERA-EWV-FERP to freely extend its hiking routes. Even clubs from **Russia** become members.

In 2021

ERA-EWV-FERP is running a network of 12 long-distance hikes, each between 2,070 and 12.000 km, for a total of 60,000 km of trails, crossing 28 countries: an incredible result. Following the principles adopted in the 1970s, these 12 E-Paths are managed by the national federations, via their regional or local committees.

However, the challenge of managing such a network is immense. There are many participants from different cultures and languages, and the interest in the E-Paths can vary from one manager to another. The E-Path may or may not be a local priority in each municipality's trail choices.



Globally, the common identification mark of the network is still the E-Paths ID logo, which complements the local, regional, and national marking charters of the countries it passes through (as these charters are inherited from local history, no federation should abandon them). A widespread recognition of this E-Path charter in local charters is not yet a complete reality.

One of the current objectives of ERA-EWV-FERP is to acquire a full understanding of the whole network, including its condition, markings, picnic area facilities, hiking services, by collecting updated information, including precise GPS tracks, from the countless local managers. The work is titanic, and the objective is to finalize and upgrade the entire network: a task to be constantly renewed.

The financial cost of trail maintenance and restoration is always borne by the local structures for the sections that concern them. The classification of the trails as E-path, which has become a pedestrian tourism brand, facilitates their search for subsidies from local authorities, tourist offices and regional and national institutions.

Coordinating and harmonizing this ambitious program of these alive and active inter-territorial and international trails, is a major mission of the European Federation.



Photo: the countries (in green) with member associations in the European Ramblers Federation



©ERA archives: hiking on the "E12" (Spain)



©ERA archives: international week of the "E12" (Italy)

5.2- "E12" The Mediterranean Trail

In collaboration with Domenico PANDOLFO, Vice-President ERA

The history of a unique international route is still under construction...

The Mediterranean basin is a special case, as the Mediterranean was the cradle of Western civilization. Since the Phoenician navigators and probably even earlier, the Mediterranean has been a laboratory where the many flourishing cultures from all its corners have met and mixed. Fernand Braudel, one of the greatest experts on the history of the Mediterranean, wrote: "What is the Mediterranean? *A thousand things at once. Not one landscape, but countless landscapes. Not a sea, but a succession of seas. Not a civilization, but civilizations piled on top of each other*".

The shores of the Mediterranean have always been traveled on foot by the locals in their different cities or the small fishing villages. The Greeks, the Romans and later during the medieval period, the peoples of the Mediterranean met in each nation, giving a pluralistic connotation to this great, densely populated basin: we can speak of an Arab Mediterranean, a Jewish Mediterranean, a Greek Mediterranean, a Roman Mediterranean, a North African Mediterranean and the list could be made even longer.

It is in this breeding ground that the idea of creating a coastal hiking trail on the shores of the Mediterranean Sea was born, in the philosophical footsteps of the founding fathers of the European Ramblers Federation: "*walking from person to person*".

GENESIS OF THE PROJECT

In 2008

The idea of establishing a coastal trail linking the cultures of 19 countries was put forward at a conference held in **Spain**. The trail surrounds the Mediterranean and is estimated to be 46,000 km away.

In 2009

A new meeting devoted to the feasibility of the project was held in **Spain**, with the participation of four motivated federations: the Federazione Italiana Escursionismo (**Italian** Excursions Federation), the Fédération Française de la Randonnée Pédestre (**French** Federation of Hiking), the Federacion Española de Deportes de Montana y Escalada (**Spanish** Federation for Mountain and Climbing Sports), and several Spanish regional federations, as well as the Association for the Development of Northern **Morocco**. The general modalities were discussed, and the project was then proposed for approval to ERA-EWV-FERP under the name "E12 - The Mediterranean Arc".

Once the concept was validated, it was decided that the trail should run along the coastline. If this condition cannot be met, the route could be moved inland if it still had "a view of the sea". The first analyses of the details of the route were then carried out:

- Survey of protected areas (parks and natural reserves, sensitive areas, etc.);
- Establishment of a list of points of particular archaeological and historical-cultural interest;
- Analysis of the problems of territories with a high density of urban agglomerations.

In the same year, the first symbolic section of 3 km E12 path was inaugurated in southern **Spain** to demonstrate the will to realize this ambitious project.

In 2010

The Federation of participants from four countries met again in **Italy** to assess the situation and check the progress of planning, which included a general report, global and reduced scale topography, data collected on the route by sections of 30 to 50 km each, identification of problems encountered, and draft of marking models.

At the same time, the first symbolic 6-kilometer-long "E12" Italian section was inaugurated in the Bay of Infreschi. This natural harbor, with its more than 3000 years of navigation history, embodies the soul of this project. ERA-EWV-FERP then officially approved the master plan, starting with the mapping of a 4,600 km trail involving the first four partner countries.

However, the plans of many parts of the "E12" remained unknown. Further, some difficulties were insurmountable: how can hikers cross vast areas that have little interest in landscape and naturalism due to industry, port, urban, dense population and tourist areas? In the end, it was decided that the possibilities of bypassing these zones by public transport, ideally by sea, but also by train or bus would be studied.

DEVELOPMENT OF THE PROJECT

In 2011

The participants gathered in **France** where a symbolic 6 km section was inaugurated. Elsewhere, work on the "E12" progressed from region to region, particularly in terms of cleaning and marking the trails that would be used.

In 2013

Once again, **Italy** sat down to hold a round table on the extension of the trail to the **Balkan** countries: **Slovenia**, **Croatia** and **Bosnia-Herzegovina** (**Serbia** also took part in the discussions, although it was not geographically concerned by this project). Although the first phase was still unfinished, it was decided that the extension of the Mediterranean ring would be by 1,600 km, from the Po Delta in **Italy** all the way to **Albania**.

From 2013 to 2020

Approximately 1,800 km (or 4% of the estimated total distance of the "E12" ring) are considered completed today. The federations of **Spain**, **Italy** and **France** continue their mission to finalize the parts in their countries in the next few years. They often add the "E12" marker on regional or national trails already widely known and frequently used.

The unique character and heritage of this Mediterranean trail have generated large-scale events mobilizing the European hiking communities and beyond. In 2013, **Italy** hosted the "E12" week with

more than 900 walkers from **Portugal, Spain, France, Denmark, the United Kingdom, Switzerland, Serbia, Malta, and Italy**. In 2015, it was **France** that received hundreds of European hikers on this Mediterranean trail. In 2017, more than 700 hikers were traveling on foot to **Spain**, including a group of hikers from Hong Kong, **China**.

CURRENT STATUS

Since its launch, this project has been carried out entirely by volunteers whose actions are self-financed by the federations: cartographic studies, field inspections, consultations, preparation of the necessary documents, etc. The work of upgrading the selected trails and their markings is also carried out by these volunteers without any external professional and financial assistance.

The delays and blockages encountered in the implementation have highlighted the shortcomings of the Master Plan. The planning phase neglected the analysis of certain aspects of the project, essential to its realization, such as:

- The geographical identification and professional study of the areas crossed by the route;
- The scientific and legal evaluation of the compatibility of the route with the local ecosystems;
- The target group of hikers to whom the route, and the local sections of the route, are addressed;
- The legislation in force in each country;
- The authorizations and permits that must be obtained before work can effectively begin;
- Social and environmental sustainability, and economic viability of the project;
- The human resources (volunteers and paid employees) available to carry out the interventions.

The passion and availability of volunteers are vital to the opening, maintenance and viability of most of the world's trails. However, without professional training and supervision, this passion and availability do not necessarily cover all the skills of such a complex project assembly connecting a Mediterranean basin shaken by frequent turbulence, and where the territories are increasingly regulated.

The ideal solution is probably a political framework (currently non-existent) shared by the countries of the Mediterranean shoreline, of which the "E12" in its complete loop could become the emblematic project. Without being able to foresee when it will be possible to close the ring of the road, hope remains regarding the values that it carries:

- The great cultural implications that it contains;
- The important positive impact it can have on the tourism in the Mediterranean region;
- The construction of a dialog between the people of the Mediterranean to overcome racial and cultural prejudices.



©ERA archives: on the gathering EuroRando 2006 in the city of Ceske Budejovice (Czech Republic)



©ERA archives: group of hikers on the "E4" during the EuroRando event (Serbia)

5.3- The "EuroRandos" of the year 2000

In collaboration with Maurice BRUZEK, initiator of the EuroRandos

Nature lovers, whether alone or in small groups away from the crowds, hikers, on the other hand, sometimes like to go out in numbers to share their passion, their cultures within a big family of "hiking enthusiasts". Each time, these episodic events are also an opportunity to develop tourism in the host region.

With this in mind, in 2000 and 2001 the European Ramblers Federation organized relay hikes on a continental scale in the shape of a star, whose epicenter was the European Council in Strasbourg. These were the first "Euro-Randos". More than 250,000 hikers converged to walk on the ten paths of the European long-distance hiking trails that started on "the edge" of the continent. The city of Strasbourg welcomed thousands of them at the end of this "long walk", with a week of festivities and meetings in the presence of high political representatives of the countries concerned as well as European elected officials.

The opening conference of the event was held in Parliament, attended by the President of the Parliament and the Secretary-General of the Council of **Europe**. This event reinforced the recognition of ERA-EWV-FERP and its members by international organizations, encouraging the pursuit of their objectives permanently and successfully. Other subjects valuable to the hiking sphere were discussed, such as pedestrian access rights to all public and private paths, and an appropriate status for volunteers, whose commitment has proven to be official and *"indispensable for Europe to grow together"*.

"A walking continent!" said the President of the French Federation, Maurice Bruzek, who initiated the EuroRandos. He had just delivered a speech in Parliament with main European leaders, before joining the final parade of tens of thousands of people under the high patronage of the President of the French Republic at that time, Jacques Chirac.

Since 2006, the concept of EuroRando is a traditional European public hiking activity, which is held every five years. That year, the **Czech Republic** was the host country: hikers came in mass from **Belgium, Denmark, Finland, France, Italy, Hungary, Germany, Poland, Portugal, Austria, Slovakia, Slovenia, Spain, Switzerland, and Great Britain...** In 2011 it was Andalusia's turn to welcome swarms of walkers from **Spain, Portugal, Denmark, Germany, France, Italy, United Kingdom, Bosnia and Herzegovina, Switzerland, Netherlands, Sweden, Montenegro, Slovakia, Czech Republic, Malta, Serbia, Slovenia...** **Sweden** was the center of convergence in 2016. In 2021, it is planned to be hosted by **Romania...**

The goal of these events is to initiate and promote meetings and interactions between hiking clubs and associations and to multiply cross-border and international exchanges, which is in parallel with the founding philosophy of bringing people together.



5.4- The label "Leading Quality Trail Best of Europe"

This quality label is the result of the European Federation's desire and is recognized by authorities at all levels as the continent's benchmark for hiking. Inaugurated in 2012, this label highlights the most beautiful hikes on trails that meet the criteria of the relevant label.

Three questions to the vice-president in charge of the label "Leading Quality Trail - Best of Europe" within the European Ramblers Federation: Armand Ducornet.

How many trails have been awarded the label so far?

AD: "There are currently 20 "Leading Quality Trail" routes. The shortest is 50 km, while the longest is 550 km (in Portugal). Another two routes in Belgium and Denmark are currently being evaluated. The labels are granted for 3 years and must then be re-evaluated".

What does this label bring?

AD: "Many advantages! First of all, for the tourists-hikers. The label helps them to choose the most interesting trails. It guarantees them a high-quality hiking experience... Further, it ensures that the rules of nature protection are respected. It also guarantees community involvement around the trails, which is important. More broadly, for a region, the use of a certified trail enriches its brand image. It is a real promotional tool".

"And it should be noted that the criteria of the label are a valuable aid to the planning, creation and improvement of trails. These criteria are also used as a checklist for countries that are still in the process of creating their hiking offer. In countries that already have an organized network of paths in good condition, such a system consolidates hiking tourism".

How is this Grail awarded?

AD: "It is a two-step process. When a request is submitted, local hikers are trained by the European Federation to assess the trail according to the imposed criteria. This allows them to make any necessary modifications to the trail. The data collected is then sent to an organization of the German Federation which manages the label on behalf of the European Federation. An expertise and an audit are then carried out. If satisfied, the label is granted for three years".

The label is applicable to domestic or cross-border hiking routes or sections with a minimum length of 50 km and at least three daily stages. The evaluation of a route is carried out at the level of :



1-Successive sections of 4 km in length (approximately one hour of walking time per section).

Each section is examined according to the following 23 optional criteria and then evaluated.

Each criteria met earns 1 point. In order to obtain the label for a length of 50 km or more, all the sections concerned must score at least 11 points each.



2-Throughout the overall length and all daily stages all core criteria must be met.

For example, a 635 km route can be labeled for its entire length, or only for one or more sections of 50 km or more each, or not get the label if the qualified sections are too short and/or discontinuous.

TABLE: The evaluation system and criteria

OPTIONAL CRITERIA - RELATED TO 4 KM SECTIONS		
Trail surface format		Limit value
1	<u>Natural trails</u> Natural, non-engineered paths without artificial fortification, easy walking	At least 1,000 m Double count if > 2,000 m
2	<u>Fortified trails</u> Paths with artificial non-sealed surfaces	Without limit
3	<u>Uneven but passable trails</u> e.g., rough loose stone/boulder cover, heavily eroded paths	Maximum 300 m
4	<u>Sealed surfaces</u> Tarmac, concrete, pavement as tread way	Maximum 500 m
5	<u>Paths</u> Trail width less than 1m 5.1. Natural paths: non-engineered paths 5.2. Safety secured path and historical stone paths	All together at least 500 m Double count if > 1.500 m
6	<u>On busy roads</u> Including unsecured crossings	Maximum 50 m
7	<u>Alongside busy roads</u> Up to a distance of one lane to the side of the road	Maximum 300 m
Trail routing system/visitor guiding		Limit value
8	<u>Marking</u> Recognition of the national marking system, as long as they comply with the fundamental principles of ERA way marking (Bechyně/Tschechien, 2004)	Complete, without gaps, correctly aligned and without errors
9	<u>Signposting</u> With details of destination, direction, distance, or time as well as number or trail identification mark	At least 2
10	<u>Network</u> Integration with other walking trails	At least 2
Nature & landscape		Limit value
11	<u>Variety</u> Distinctly different landscape formations	At least 3
12	<u>Natural quietness</u> No noises from machines or traffic	At least 1,000 m continuous
13	<u>Attractive natural landscape</u> Special biotopes and geotopes, impressive forests, coastal landscapes, rock formations, parks, etc.	At least 1 (If more than one, double count)
14	<u>Natural water</u> e.g., natural wells, streams, rivers, lakes, bogs, etc.	At least 1 (If more than one, double count)
15	<u>Points of natural beauty</u> e.g., summits, gorges, ravines, rocks, caves, waterfalls, natural heritage sites, etc.	At least 1 (If more than one, double count)

16	<u>Impressive panoramas</u> Continuous free views (at least 3 years guaranteed) min. 45-degree openings and 2,000 m visibility	At least 1 (if more than one, double count)
Culture		Limit value
17	<u>Pleasing urban scenes</u> e.g., old town areas, representative buildings and squares, rural village scenes	At least 1 (if more than one, double count)
18	<u>Local attractions</u> Cultural and historical sites of local and/or regional importance	At least 2
19	<u>National attractions</u> e.g., castles, monasteries, national monuments	At least 1 (If more than one, double count)
Civilisation		Limit value
20	<u>Intensively developed environment</u> Intensively built up areas, industrial parks, water treatment plants,	maximum 300 m
21	<u>Service provision</u> Gastronomy or shops for catering provisions open from midday and at least 5 days per week	At least 1
22	<u>Access points for public or private transport</u> Regular service, at least a connection every 2 hours	At least 1
23	<u>Resting point</u> e.g., Benches, chairs, huts, etc.	At least 2

(Source: © European Ramblers Federation (ERA) 2019)

CORE CRITERIA - BY DAILY STAGES	
Core criteria	Characteristic
<u>Safety</u>	On all daily stages the safety regulations/ requirements have to be in accordance with national law/legal framework
<u>Grading of the daily stage</u>	Easy, moderate, strenuous, very difficult
<u>Walker friendly entry</u> Walking portal, walkers' car park	Availability of information about the trail
<u>Mobility</u> Villages/ towns (daily stage access points) along the route are connected to the trail by public transport (bus, train, taxi, cab)	At least 2 connections daily, or access via signposted access routes no further than 2-3 hours walking distance to trail
<u>Accommodation</u> Hotel, guesthouse, B&B, hostel, campsite, pick up transfer	At the start and end of each daily stage there has to be overnight accommodation or transfer possibility available
<u>Luggage transport</u>	Can be booked through a local provider (Accommodation provider, taxi company, tourist information, etc.)
<u>Private property/access</u>	Access to private property (restricted by gates, fences, walls, hedges, etc.) must be guaranteed from 9am to 5pm

(Source: © European Ramblers Federation (ERA) 2019)

CORE CRITERIA - RELATED TO THE COMPLETE ROUTE	
Core criteria	Characteristic
<u>Natural trails</u>	At least 35% of the overall route
<u>Uneven but passable trails</u>	Max 5% of the overall route, max. 1,500 m in one piece
<u>Sealed surfaces</u>	Max 20% of the overall route

	Max. 3,000 m continuously
<u>On busy roads</u>	Max. 3% of the overall route Max. 300 m continuously
<u>Alongside busy roads</u>	Max. 10% of the overall route Max. 3,000 m continuously
<u>Marking</u>	100% of the overall route
<u>Variety</u>	At least 2 formation changes per 8 km
<u>Experience/adventure potential</u>	At least 4 points per 8 km for the choice criteria 13-19
<u>Intensively used environment</u>	Max. 7.5% of the overall route Max. 3,000 m continuously
<u>Hiker-friendly entry at start end of trail</u>	At least 1 headboard with information about the route, at least 2 languages (local language + 1 other; English, French or German)
<u>Mobility at start end of trail</u> Start and end point of trail are serviced by public transport (bus/train, alternative walkers' taxi)	At least 2 services daily

(Source: © European Ramblers Federation (ERA) 2019)





KEY POINTS TO REMEMBER

What makes a good inter- territory trail according to ERA- EWV-FERP?

Good information for
the hiker

Natural
trails

Few big
cities to
cross

Good
signage

Cultural,
historical,
gastronomic, etc.

Few paved
roads

Traffic
facilities

All related
services

A variety of
natural
landscapes

TRAIL OFFERINGS BASED ON THE TERRITORY'S ATTRACTIONS

6

The appeal of a territory consists of its natural (including landscapes, fauna, flora, and climate) and cultural (including history, local populations, monuments, and institutions) resources. This appeal is the foundation of the territory's identity: it exists independently of tourism.

The tourist attraction is generated by an appropriate highlighting of these "appeal". It is generally a question of creating facilities and infrastructure especially invested to attract visitors. This attraction can be:

- A discovery where the walker is a spectator in front of a landscape or in a natural site organized as a museum;
- An evasion where the visitor is an actor in this landscape and can go in search of experiences.

The appeal of the territory and its highlighting, particularly through the creation of hiking routes (attraction, search for evasion), with related services, are the attributes that make up the "tourism/outdoor sports product and destination". The theme of which may be "trails".

This chapter presents a variety of hiking products according to the appeal of the territories classified in this chapter on a scale of four levels of interest: national/international, regional, local and degraded.

Attract - Anchor - Retain

Discovery attractions generally generate passing tourists who do not stay and who contribute little to the local economy.

This is in contrast to evasion attractions which, if the recreational activities are enjoyable and varied, can help anchor tourists to the area and retain them so that they return and bring their friends.

CHAPTER SUMMARY

- 6.1 International level appeal
- 6.2 Regional level appeal
- 6.3 Local appeal
- 6.4 Degraded space
- 6.5 From trail brand to brand territory



6.1- International level appeal



These are the top destinations whose level of appeal is such that they do not need human highlighting to attract visitors. These are generally sites of primitive or semi-domesticated nature.

The top sites that today remain poorly developed and not well organized for tourism are generally remote, not very accessible and have not been transformed by humans. The isolation, the absence of commercial hiking organizations and landscape development, the preserved authenticity, are assets that have become rare and with added value that attract nature lovers, hikers, trekkers, and backpackers in search of exceptional tourism.

The top-sites that have well-developed infrastructures (airports, roads, resorts, cable cars, real estate complexes, leisure facilities, etc.) promoted by marketing campaigns, systematically attract mass tourism whose economic impact can be considerable but with no less considerable pressures on the local ecological and social environments.

If the systematic challenge of top sites is to reconcile economic exploitation with the protection of nature, it is necessary to find a balance between mass consumption tourism and high-quality tourism experiences. Over-visited centers tend to scare away hikers who prefer to escape from the crowds into the unspoiled nature of the site, where permitted by local regulations.

Top destinations are often classified as protected reserves.

EXAMPLES OF THE PLACE AND ORGANIZATION OF HIKING IN TOP DESTINATIONS

THE CHAMONIX VALLEY (FRANCE) "World capital of mountain sports"

The Chamonix valley:

- A territory of 347 km² with four communes for 14,000 inhabitants, 82,000 tourist beds and 50,000 in secondary residences;
- Three national nature reserves with free access but with their own regulations (no littering, no camping or campfires, no flower picking, no motorized vehicles, no overflights (drones, paragliders, airplanes) within 300 m of the ground, dogs must be kept on a leash, wildlife must be respected and protected);
- Part of the Mont Blanc highland, one of the largest "classified sites" in Europe (223 km²);
- The reference of the first winter Olympic city in 1924 and a paradise for tourism and mountain sports: hiking, mountaineering, skiing, etc.
- The world reference for trail running of the UTMB;

History of hiking: in 1741, two English tourists, Windham and Pocock, who came to visit Chamonix, discovered the glaciers descending from Mont Blanc. The story from their travels would later spread throughout Europe.. The crystal seekers and hunters of Chamonix became guides, in what was the beginning of hiking and mountain tourism for a European aristocracy motivated by the fresh air and beautiful landscapes.

Statistics of the hiking activity in the Chamonix Valley

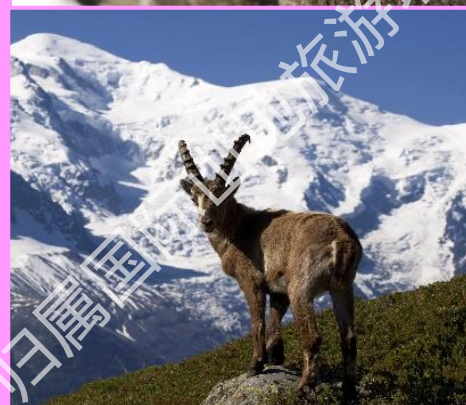
- 480 km of trails for 170 marked routes (excluding high mountain);
- A majority of residents and 5 million tourists annually hike;
- The Compagnie des Guides de Chamonix (Company of the Guides of Chamonix) (the first company in the world founded in 1881) has 60 hiking guides and 180 high mountain guides;
- 17€ (or 220€ for 10 people) is the daily rate for a hiking guide;
- 500€ to 1000€ (depending on the size of the group and the level of service) is the price/person for the organization of the Tour du Mont Blanc (Tour of the Mont Blanc) (6 days).

Statistics of the hiking activity in the entire Auvergne-Rhône-Alpes region

- 28% of national and foreign tourists in 2019 said they came to hike and 21% were attracted by the opportunity to discover the local nature;
- 33,050 km of marked trails in the region (most in any region in France for hiking);
- 1,690 professional hiking guides live in the province.

Local organization of hiking activities

- Free access to the network of trails: nature is considered a common good to be protected but which must be open to all;
- The maintenance is ensured by a "communal service" with 15 agents;
- The only hiking facility in the region that charges a fee is the suspended trail of the Diosaz Gorge created in 1871 and managed by a private operator, with an entrance fee of 6.5€ for adults;
- Mountain rescue is free of charge and since 1958 under the responsibility of the Peloton de Gendarmerie de Haute Montagne (High Mountain Gendarmerie Rescue Team) supported by the helicopters of the Gendarmerie (38 qualified rescue guides reinforced by emergency doctors). In the Chamonix valley (in the



administrative sense, i.e. the territory of six communes), 140 rescue operations are carried out each year for hikers (excluding snow and high mountain rescues) and out of a total of 850 operations for all combined leisure activities.

For Mont Blanc highland, crosses the borders of France, Switzerland and Italy, bilateral agreements between the rescue organizations of the three countries enable immediate cooperation without any form of cooperation and regardless of border intervention. This international mutual aid also allows a pooling of means.

Hiking as a part of global concerns

A complicated balance exists between:

- A massive tourist industrialization in some areas with heavy equipment (five interconnected ski resorts, 15 ski lifts, etc.) and an intensification of cross-border exchanges (French-Italian Mont Blanc tunnel put into use in 1965) resulting in the artificialization and over-urbanization of the valley, over-frequentation (100,000 visitors per day in summer and 60,000 to 80,000 in winter), the near disappearance of agricultural and pastoral practices, pollution in the air and water, waste dumping;
- An urgent need to protect the environment with a priority to give to exceptional tourism experience by reconciling the preservation of wild natural environments and landscapes through keeping socio-economic activities open, shared and sustainable.

Sources: Chamonix Tourist Office, Compagnie des guides de Chamonix (Company of the Guides of Chamonix), PGHM, AURA Region, Savoie-Mont Blanc



YOSEMITE NATIONAL PARK (USA)

Yosemite:

- A national park founded in 1890 that has remained as it was before the arrival of humans: 3,100 km² of which 94,5% is preserved and wild nature;
- One of the most beautiful places for hiking;
- One of the emblems of the American environmentalist philosophy of "wilderness" born in the 19th century in the USA;
- The valley bottoms are almost completely unurbanized and the mountain is completely undeveloped (except for a few natural trails).

Statistics of the park:

- 5.5% of the total area of the park, i.e., 350 km², is dedicated to mass tourism with integrated reception centers at the bottom of the three valleys;
- Operational budget of US\$29 million, 800 park employees, 1,300 employees of the reception services, 1,363 hotel rooms, 1,535 camping places for a capacity of 9,550 campers (the number of nights/persons/years is limited);
- 3.5 to 5 million visitors/year: 75% local and national US citizens and 25% foreigners in summer; and 91% US citizens and 9% foreigners in winter;
- A fee of US\$35/car for a park access pass (regardless of the number of passengers) valid for 7-days and multiple entries, US\$15 for one person on foot



or horseback, US\$70 for a year-round car pass, US\$80 for a lifetime car pass for seniors over 62 years old;

- 80% of the financial income is reinvested in the park, its management, protection and activities;
- The National Park Service manages Yosemite in collaboration with associations, with the support of donors, training programs for junior rangers, natural heritage awareness, environmental education and accountability of the public and youth in particular.

History of hiking

For generations, long before the development of today's popular trails, Miwok and Paiute, two groups of Native Americans, frequented the Yosemite and Sierra trails. The first tourist uses of these trails date back to the 1800s. While investors in the 19th century began building trails for profit, wilderness pioneers like naturalist John Muir succeeded in placing the area under state protection and making it a non-commercial common good to be discovered and preserved. The John Muir Trail has become a legendary hike.

Statistics of hiking in Yosemite

- 1,350 km of trails in the wilderness, 32 km of greenway in the valley bottoms;
- 93% of summer visitors say they were attracted by the scenery, 54% come for day hiking, 66% use the trails, 59% consider the trails "extremely important" and 31% "very important" to the park. In the surveys, trails are also the first "quality service" checked by visitors;
- 84% of winter visitors say they are motivated by the landscape, 35% come for day hiking;
- The vast majority use the trails independently;
- 50,000 to 72,000 hikers/year spend at least one night in the wilderness;
- 200 to 300 rescue operations are performed each year;
- US\$250 is the daily rate for a hiking guide for multi-day group excursions. For an 8-hour excursion, the rate is US\$550 for 10 people or US\$200 for a single person;
- US\$1,500/person is the price for organizing a 6-day hike on the Muir Trail.

Organization of hiking activities

Increasingly constraining regulations to keep the wilderness open and ensure a wild and high-quality environment:

Day use: open and free access on all trails with conditions (no smoking, no fires, no littering, no dogs, no flying drones, no camping, no disturbing or feeding wildlife, no hunting, no walking off-trail, etc.) Human feces are to be buried in the ground 20 cm deep and 300 m from trails, campsites, and water sources. Food should not be stored in the tent at the campsite or in the car in the parking lot (15 to 40 incidents of bears tearing apart vehicles are reported each year and violators can be fined US\$5,000 and expelled from the park).

Multi-day use: a "wilderness permit" is required (US\$10). The number of people is limited to 25 (including guides) per day for each trailhead. A group of hikers cannot exceed 15 people (eight for trail runners). A part of each daily quota per trailhead is confirmed at the time of booking and the rest of the quota is drawn by lottery that fairly selects the lucky ones. It is only after the group leader has successfully passed a online information and training course to verify their perfect understanding of the on-site regulatory conditions, that the permit will be sent to the recipient by email. All hikers must respect the following rules: an anti-bear container is required for carrying food, camping points can be imposed, tents and bivouacs should be pitched more than 6.5 km from tourist centers and more than 30 m from trails and water sources, with a maximum of 30 nights per person per year.



For climbing the Half Dome, a special permit is required and granted after checking the experience level of the candidates: the hike is arduous, long and the only one with progression facilities (cables).

Signs at the entrances to the hiking trails indicate "Hikers assume their own risk".

Hiking as a part of global concerns

- The permanent search for a balance between protecting nature and welcoming the public;
- The impacts of global warming:
 - o The glaciers at the north of the park are on the verge of disappearing;
 - o The combined effects of dry vegetation, low humidity, frequent thunderstorms and a large number of careless tourists incite fires to break out every summer. In the fall of 2019, nearly 200 hikers were trapped by a fire and had to be evacuated.

(Sources: Yosemite Nat Park Visitor Study - Summer 2009 - from University of Idaho; Yosemite Nat Park Visitor Study - winter 2008 - from University of Idaho; NPS Wilderness regulations)



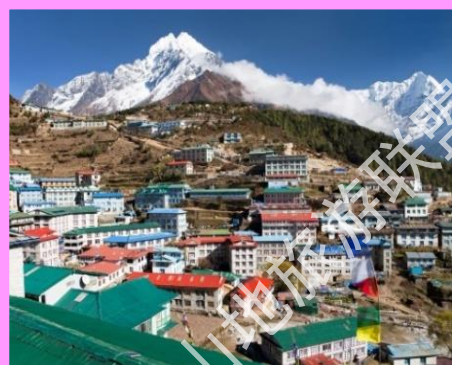
SAGARMATHA NATIONAL PARK (Nepal)

The Sagarmatha National Park:

- 1,148 km² of surface in the heart of the Himalayas, with Mount Everest, the highest mountain in the world, as the highlight;
- An altitude ranging from 2,845 m to 8,848 m (the summit of Mount Everest);
- A territory sheltering 20 villages with a population of more than 6,000 people, mainly Sherpas making a living from the agro-pastoralism, tourism and perpetuating traditional practices;
- A mountainous area with the only communication routes being a dense network of trails that has been used and maintained by the local population for commercial portage by men and yaks since ancient times;
- A world-renowned destination for long-distance hiking tourism.

History of hiking in the region

- The first expeditions to the high peaks, including the ascent of Mount Everest in 1953, opened the door to mountain tourism in Nepal. The first trekking agencies were created in Kathmandu in the 1960s. The significant growth of trekking tourism offered new jobs to the Himalayan peasants (portages, guides, accommodation, catering and various services). On the other hand, it has been detrimental to the environment and cultural traditions of the region (increasing energy needs, deforestation, waste disposal problems, illegal trail development, etc.);
- To better promote hiking tourism while controlling the pressures and strengthen the protection of the site, the Everest region became Sagarmatha National Park in 1976.



Statistics of the park

- More than 25 major trekking routes within the park;
- 3,350 hikers in 2001, 9,000 in 2010, 30,000 in 2017 and 2019;
- It is only foreign tourism and not local;
- The daily rate of a trekking guide depends on the agency, the type of work (group or individual) and the language requirements. The price ranges from US\$40 to US\$80/day for a French-speaking guide and US\$20 to US\$45 for an English-speaking guide. The minimum is around US\$15 per day.

Organization of the park and the trails

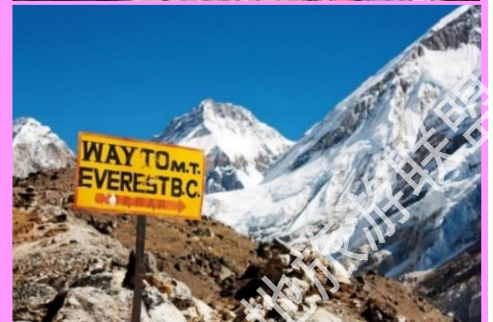
- The park is managed by the Sagarmatha National Park Authority of the Department of National Parks and Wildlife Conservation (DNPWC) in collaboration with local communities, the Nepalese Army, the Sagarmatha Non-Governmental Pollution Control Committee (SNPC), an advisory committee composed of local leaders, village elders, lama leaders, etc., with the help of foreign cooperations;
- The government provides the regular budget for the management and gives 50% of the park's income to the local communities;
- Tourists-trekkers are allowed to enter the park whether they are clients of an agency or have organized their own hikes, alone or in groups. All trekkers must have a TIMS (Trekkers' Information Management System) pass (cost US\$10-20) and pay the entry permit for the protected area (US\$20/person for the first four weeks and US\$25 per additional week);
- The main regulations prohibit taking and harming animals and plants, using ATVs and motorcycles, interfering with local culture and religion, camping outside of designated areas, being self-sufficient in fuel, dumping trash, etc.

Hiking as a part of global concerns

- The organization in the 2016-2020 management plan considers enhanced regulation and monitoring of hiker and climber behavior to further prevent site degradation, illegal wood collection, littering, helicopter use, overcrowding of trails and fragile peaks;
- Climate change is recognized as a serious issue (decreased snowfall, increased variability of monsoon rains, increased extreme events, increased natural hazards affecting people). As a result, the Everest region is the focus of recent physical science research upon the future of glaciers. "Seasons change... it's like everything else here" explained a Sherpa villager from the village of Pangboche (2019 study by the International Journal of Humanities and Social Science: ethnographiques.org). This remark should lead us to consider the climate in interaction with other factors of change, in a space that is experiencing profound upheavals of various kinds: environmental, economic, social and cultural, and one of these factors is hiking tourism.

It is in this context that the resumption of a trekking economy will have to be organized in the period following the Covid-19 health crisis, which is responsible for the almost complete cessation of this activity in the park.

(Source: Nepal Mountaineering Association; Nepal Tourism Board)





KILIMANJARO NATIONAL PARK, KINAPA (TANZANIA)

The Kinapa Park:

- 1,688 km² of protected areas since 1973 that opened to tourism in 1977;
- The highest peak and volcano on the African continent, Mount Kilimanjaro, culminating at 5,895 meters above sea level;
- A luxuriant savannah with numerous species, some of which are threatened;
- A site that has become world-famous for hiking and safaris, but Kinapa Park also offers other experiences such as mountain biking, rock climbing, crater camping, and tours to waterfalls and cultural sites, etc.

Hiking History

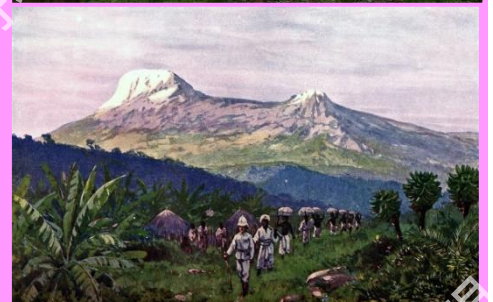
The Maasai people have walked the slopes of Mount Kilimanjaro since ancient times. Since the 14th century, stories of a "white mountain" in the heart of Africa has attracted the interest of many British and German explorers, geographers and naturalists who set out on the trails of Kilimanjaro, reaching its summit in 1889. In the 1980s, the frequentation of the site increased dramatically.

Statistics of the park:

- 7 trails of different difficulty levels to climb Kilimanjaro. These hikes in high altitude require between six and ten days for 40 to 45 kilometers;
- 10,000 porters, 500 cooks and 400 guides make a living from the hiking economy in the Park;
- Between 50,000 and 60,000 foreign tourists visit the park each year and 25,000 to 30,000 people trek Kilimanjaro, twice as many as 20 years ago;
- The park and its activities (including trekking) bring in US\$50 million/year to Tanzania, of which 13 million are declared reinvested for the benefit of local rural communities.

Organizing hiking in the park:

- It costs of entrance fee (US\$70) and trekking permit, staying and camping taxes, local insurance for ground rescue, etc., comes to US\$140/day/person;
- The regulations require a professional accompaniment team for Kilimanjaro which is composed of guides, cooks and porters;
- The route is lined with refuges (mountain huts), camping areas and taverns;
- The price is US\$1,800 to US\$6,000/person (depending on the agency) for the organization of a 6-day Kilimanjaro trek by the obligatory local commercial organizations. Free hiking is not allowed;
- The salary of a porter is less than US\$10/day and it is not much higher for guides, cooks and other assistants. These are the customary tips that hikers must pay directly to the management staff who share the "money in the pool" amounting to 10 or 15% of the trekking price;
- In case of rescue, the operation can be either terrestrial at the charge of the trekking agency assisted by the park services (the climbing permit includes this service), or by helicopter. Several private companies can provide air evacuation (in particular Kilimanjaro Search & Rescue) but recently the government requested Kinapa Park and Tanapa (Tanzania's National Parks Agency) to invest in helicopter-based means to fight fires and carry out rescues of tourists and hikers. The cost of an evacuation amounts to between US\$3,000 and US\$5,000 to be paid by the victim unless he or she has previously provided a certificate of insurance to cover the cost of a rescue.



Hiking as a part of global concerns

The huge benefits generated by trekking tourism in the area can be redistributed more equitably, as in some places, the local communities are very poor. The environmental management of the park could also be strengthened to better meet the challenge of collecting solid waste and controlling various types of pollution, especially around the periphery of the camps and inhabited areas. Measures for protecting ecosystems, controlling visitor numbers, and providing ecological infrastructure to accommodate flow of hikers could also be further strengthened.

The qualification of the professionals can be improved to avoid accidents, especially those related to altitude. The planning of the ascents does not always respect the time necessary for the acclimatization of the hikers and is used as a way to increase the turn-over of the activities, sometimes at the expense of the customers' safety.

In October 2020, the Tanzanian national newspaper "The Citizen" ran the headline "Mount Kilimanjaro on fire!" A gigantic fire had occurred at a high altitude below the summit following the carelessness of trekkers. The soil and vegetation are becoming drier and drier due to global warming and large-scale logging activities before the site was included in the nature reserve. The ice cap, estimated at 12 km² at the time of the first ascent in 1889, measures only 2 km² today and is expected to disappear within 10 years: an alarming prospect for the ecological balance and the communities around this emblematic volcano who depend on this water reservoir.

(sources Banque Mondiale ; Etude Master Tourisme 2015 à l'Université de Tanzanie ; UIAA International Union of Mountain associations Report 2017 ; Worldbank, Tourism in Africa, Harnessing tourism for growth and improved livelihoods 2014)



Between cultures and site management

Cultural differences between countries are also reflected in the differences in management of high natural value reserves (facilities, access to nature, regulations), in which hiking, and walking are the central sources of income.



The Iguacu National Park between Brazil and Argentina is an exceptional site in an indigenous forest. The walks are done only on sanitized trails that leads the visitors to the viewpoints of the waterfalls in the area.

Powerful speedboats allow visitors to approach the falls from the river and make full turnovers of tourists. The site is laid out and operated like an amusement park. Entrance fee: US\$35/person/single entry.



Zhangjiajie National Park in China with Tianmen Mountain and the Stone Forest. Cable cars, elevators, and glass trails in the cliffs, dotted with shops, channel the walks of visitors. The site is a grandiose open-air spectacle. Apart from heavy tourist facilities, the primitive nature is under full protection and inaccessible. Entrance fee: US\$35/person/single entry.





Bryce Canyon National Park in Utah, USA. A panoramic road is set up on the periphery with some reception facilities. The site has no facilities except for a network of a dozen of natural trails of varying lengths and difficulty. Other activities are possible at the edge of the park, including rock climbing, cross-country skiing, and snowshoeing in winter.

Entrance fee: US\$35/vehicle (up to a capacity of 15 people and valid for multi-entries over 7 days). The activities are free, provided that the safety and environmental protection regulations are respected.



The Dolomites Bellunesi National Park in Italy. Roads lead to the foot of the mountain pastures, which are crisscrossed with natural paths and trails. The park is dotted with a few refuges with dining and sleeping facilities for hiking enthusiasts.

The highland is open for all kinds of outdoor activities: trekking, climbing, mountaineering, paragliding, wingsuit flying, canoeing-kayaking, and ski touring in winter. All outdoor sports are free provided that the park's guidelines are respected, except for services such as refuges, which are subject to a fee. No heavy equipment is implanted in the preserved mountain. Even though many tourists visit the area each year, it never gets overcrowded, and tourism does therefore not have any significant impact on the environment



Natural phenomena that enhance the appeal of a site and its hikes ...

Due to its geographical location, shape and local climate, trails and places sometimes benefit from natural phenomena, which often occur and bring immeasurable value to hiking. These are for example the aurora borealis in the wide-open spaces of Abisko in Sweden, the seas of clouds in Huangshan in Anhui of China, the sunsets in the axis of the narrow gorge of Yangbi in Yunnan of China, the Brocken Specter in the Alps in France, the rays of the sun that pierce the Getu cave in Guizhou of China, the rainbows on the Skogafoss waterfall in Iceland.





6.2- Regional level appeal



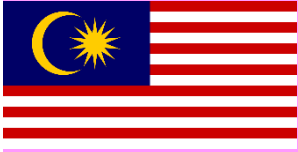
The diversity of landscapes, the respected and preserved natural heritage, the vivacity of local traditions, a historical or cultural heritage, a welcoming climate, etc. constitute for these regions and territories the assets on which they can build their attraction.

The highlighting of these assets through a hiking activity offers the visitors the possibility to travel the territory at their own pace, to discover its richness, to meet the inhabitants, to eat at the farm, to taste the local products, to be interested in the crafts, to camp in the nature, etc. There are a thousand and one ways to promote a region through a hiking offer.

The customer base is local and regional but can be national and international if the products are of high quality and are promoting the soul of this territory.

Photo: Provence lavender fields in France; Amriswil-Bischofszell in Switzerland; Tuscany in Italy; the Rockies mountains in Canada; the Meteors in Greece; the cliffs of Etretats in France

EXAMPLES OF THE PLACE AND ORGANIZATION OF HIKING IN REGIONAL DESTINATIONS



MOUNT KINABALU NATIONAL PARK (MALAYSIA, BORNEO)

The Mount Kinabalu National Park:

- A high-class biological site with 75,370 hectares of protected land;
- The highest peak in Southeast Asia with Mount Kinabalu culminating at 4095 m;
- The pedestrian ascent of Mount Kinabalu is the flagship attraction but other hiking routes in the forests and flower gardens also contribute to the success of the park;
- 749,000 visitors in 2019 of which two-thirds were Malaysians and the rest foreigners. This figure represents 44% of all visitors to the six national parks in Malaysia, which makes Kinabalu by far the most visited.

The levers of success of tourism in Kinabalu

- The very rich biodiversity is a notable potential for nature tourism and ecotourism: a growing segment of the tourism market;
- The natural resources of Kinabalu Park attract outdoor sports enthusiasts (hikers, climbers, etc.) as well as families (walks in the forest or the tree canopy), naturalists, plant or bird watchers, photography enthusiasts, etc. Almost everyone can enjoy walking and hiking as part of their activities.

The history of hiking

In 1851, the English botanist Hugh Low and the zoologist Whitehead arrived in Borneo. Accompanied by about 40 local guides and porters, they explored the path crossing the territory of the park up to the summit plateau of Kinabalu granite.

Statistics of the park

- Between 40,000 and 50,000 hikers attempt the Kinabalu summit trail each year. The trail takes two days and one night with an 18 km round trip and 2,200 m of positive difference in altitude;
- In the Kinabalu park, it is recommended that you take a via ferrata (a safe climbing route) with a guide (US\$350/day), but there are also nine pedestrian trails for shorter walks, 20 minutes to three hours, marked out and maintained for visitors who want to do easier hikes.

Organization of hiking activities

- The organization Sabah Parks is the owner and manager of the park;
- A guide per group is mandatory for the Kinabalu trek;
- The cost of the ascent is between US\$250 to US\$300/person including park entrance fees, climbing permit, guide, and refuge;
- Since 2020, the maximum number of hikers on the Kinabalu trail has been reduced from 135 to 100 per day for site preservation reasons. The figure was about 190 hikers/day in 2015 depending on the accommodation capacity for the stage for the night of ascent;
- The guide is responsible for the safety of the clients. In case of serious injury, it is the guide who alerts the Mountain Search and Rescue Unit (MOSAR). The client is responsible for the costs.

Hiking as a part of global concerns

Climate change, severe natural erosion, increased forest fires in the region, and increased demand for tourist access are making the park site increasingly vulnerable. As the park's reputation is good, the major challenge is no longer tourism and economic development



but the protection of fragile ecosystems and environmental education of the public, which has become the main focus of the park. This is evidenced by these two actions:

- Access to the Mount Kinabalu trail has been limited to 100 hikers/day, despite the park's limited entrance;
- The "Climbathon" trail at the top of Kinabalu, a renowned mountain race created in 1984 that became an asset for the tourism promotion of the site, was permanently stopped in 2017 for ecological reasons.



PROVINCE OF ARDÈCHE (FRANCE) "The land of nature sports"

Region of Ardèche:

- A leading destination among the rural provinces of France with nearly 2.5 million visitors and 14 million tourist nights (2019 statistics);
- 5,530 km² of total area, with 38 protected areas including a national park;
- A rich and preserved natural and cultural heritage: gorges, rivers, cliffs, forests, the famous Chauvet Cave with 30,000-year-old rock engravings and many authentic villages from the medieval period;
- A Mediterranean climate favorable to tourism all year round;
- One of the leading territories in France in terms of sports and leisure activities at all levels;
- 360 sports events per year (2019 statistics), two-thirds of which are pedestrian events: hiking, running, trail, rally or multi-sport races such as triathlons and run&bike.



The levers of success of tourism in Ardèche:

- The diversity of nature sports and the quality offers. The result of an ultra-voluntary policy carried out for more than 20 years, the nature sports, including hiking trails, are today the showcase and DNA of this province;
- Ardèche has been able to preserve and develop its rich heritage. The authorities are committed to sublimate the diversity of its heritage (natural, cultural, artistic, technological, religious, etc.) while developing high-quality reception and services.



Statistics of the local hiking activities:

- 12,000 km of marked hiking routes (the highest density of hiking paths in the country on the administrative scale of a province);
- 40 km of specially marked trail-running routes;
- 200 km of greenways cross Ardèche (Viarhona and Dolce Via);
- 31 hiking clubs with 17,000 members and volunteers in (2019 figures): the actual number of local hikers is much higher, considering that 90% of the hikers practice outside of any organizational framework and are therefore difficult to count;
- 50% of the tourists declare to practice a sport of nature including hiking during their visit in Ardèche. One-third of the stays in Ardèche are motivated by hiking. The global revenue generated by the tourists-hikers is estimated at 110 million euros. On average, each hiker spends 22€/day during their hike (excluding travel and accommodation). The local community benefits from this, like the town of Vallon Pont d'Arc and its 2,500 inhabitants seeing its population multiply by 14 in high season with holiday makers coming from all over Europe.



Organization of hiking activities:

- The entire network of hiking trails is freely accessible and free of charge;
- Ardèche has an innovative system for maintaining the trails. Indeed, in the process of integration, the municipalities call upon the "green brigades" composed of young people supervised by a professional. These brigades belong to a social utility consortium with local companies and associations whose vocation is integration through economic activity. One of the partnerships allows convicts from a penitentiary center to participate in the maintenance of hiking trails as part of their community punishment service. At the same time, hiking clubs and volunteers are involved in maintenance work that does not require heavy equipment means (paint marks, manual brush clearing, etc.);
- The Province subsidizes hiking associations and finances the acquisition of materials (information panels at the entrance of the trails).

Hiking as a part of global concerns

The hiking trails in Ardèche, beyond the discovery and tourism aspect, are part of a more global scheme that encourages the use of soft mobility in daily life. Hiking routes that used to be mainly located in rural areas are now getting closer and linked to the urban environment. In Ardèche, hiking trails also allow the population to go shopping in the village, to go to school, to work, etc., on foot or by bicycle. Encouraging the population to use these soft paths allows to reduce the impact on the environment by decreasing CO2 emissions but also to bring benefits for the health and well-being of the population by fighting against sedentary life and obesity.

The development of the Ardèche policy in favor of hiking is part of a global project at the intersection of the sport, tourism, economic, environmental and health sectors

(Source: Ardèche Développement Tourisme ADT)



ALSACE REGION (France)

"A gentle land of walking tours"

Alsace:

- 8,280 km² covered with countryside and vineyards dotted with traditional flowered villages and medieval castles, forests of the Vosges mountains, crisscrossed with trails;
- A strong identity heritage, full of history;
- Excellent know-how (local products, gastronomy, crafts, etc.)
- A vast population of 30 million people within three hours travel time from their homes;
- 23 reserves and classified natural parks;
- 23 million visitors/year, 15 million tourists;

The levers of success of Alsatian tourism

- A destination with a strong identity, on the border with Germany and Switzerland, with many attractive sites located between the Rhine River and the Vosges mountains.
- A rich diversity of landscapes: plains, rieds, forests, wine-growing foothills, valleys, ridges and summits of pastures and high stubble fields up to 1424 m of altitude;
- Preserved natural heritage, architectural and cultural heritage recognized at the national and even international level;
- Major tourist events, including numerous Christmas markets and festivals;
- The excellence of its gastronomy and its productions (wines, beers, etc.).



History of hiking in Alsace

Two associations recognized as being of public utility have marked the history of hiking and remain major participants in the development and promotion of this activity today, responsible for research, development, marking, and voluntary maintenance of the network of trails, among other things:

- The "Vosges Club" founded in 1872 (at the time when the region was attached to **Germany**);
- The "Nature Friends", a club born in 1895 in **Austria** that began to develop in Alsace at the beginning of the 20th century.

Statistics of the local hiking activities

- More than 17,000 km of marked trails and paths for hiking
- Hiking is a very popular activity among tourists: 46% declare that they go for walks in nature and the forest, 29% go for hikes of half a day or more;
- Hiking is also an activity much appreciated by the local population. The real number of hiking enthusiasts is large but difficult to quantify considering that most locals go hiking outside of any organization and supervision. 135 hiking structures (including clubs and associations) are installed in the region.

Organization of the hiking activity

- The entire network of trails (except for a few thematic sites such as the Monkey Mountain Animal Park) is freely accessible and free of charge;
- The maintenance of the trails is ensured by the volunteers of the clubs and the financial assistance of the local authorities based on annual agreements. The services of the municipalities can participate in the creation and maintenance of trails and in the development of facilities such as benches, gazebos, etc. ;
- The wine routes are very popular, allowing people to discover (by walking or cycling) the vineyard, its producers, its products and its villages. The benefits are significant but difficult to quantify;
- Long inter-territory French (GR) and European (E-Path) trails running through Alsace and the Vosges and are very popular with itinerant hikers.

Sources:

- Alsace Development Tourism - ADT;
- ART Grand Est, key figures 2019;
- Regional tourism observatory 2016 and 2018;
- The In-depth Territorial Diagnosis "Nature sports in Alsace".



Suggestion for karst landscapes: the "sky walk"

This landscape profile covers many territories in South Asia. In China, karst landscapes cover the two full two provinces of Guizhou and Guangxi: the surface of these 2 provinces exceeds the national surface of France. Some sites are national and even international attractions.



Photo: Guizhou China

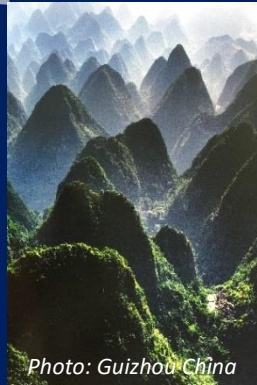


Photo: Guizhou China



Photo: Guangxi China

Other sites have regional or local attractions. A community wishing to create an original tourist trail could create a unique hiking product by linking several karst peaks with continuous and suspended footbridges. Except for the anchoring areas, the impact on nature is low. A "sky walk" could become a hike that pleases a lot, and propel a destination seeking to increase his potential!

Many hiking trails in the world have footbridges to cross ravines. The longest of these are over 500 m long.



Suggested project in Xingyi, Guizhou (2017,SK)



Model of a footbridge





6.3 - Local appeal



These are mostly ordinary places that do not, at first sight, have enough appeal to create a tourist product and attract tourists and hikers. Forests, pastures, or agricultural farmlands, with villages that do not have any particular appeal, and that make up landscapes with little or no other value.

Nevertheless, this situation should not make us lose sight of the interest of community trails for recreational purposes intended for the local population, which could become the basis for the development of tourist and sports activities.

In that kind of regions, it is essential to be more active in highlighting the local charm, restoring traditional village architecture, promoting local crafts and products, providing a more welcoming experience and in offering a variety of leisure activities, including hiking. The focus is on the local, regional, and neighboring population more or less far away.

The creativity in the design of trail offers can make a huge difference and significantly increase the interest of the trail options, regardless of the landscape. Because they are thousand and one ways to hike. (Refer to P1 - Chapter 6)

Although these ordinary tourist lands have advantages that are almost non-existent in the top destinations: few regulations, more space of freedom, of opportunities to camp, to build a campfire, or to immerse yourself in nature.

Photo: country road in Spain, rocky road in Ukraine, countryside in Sweden, Mai Chau in Vietnam, Forest road in Germany, desert countryside of Morocco.

EXAMPLE OF A SUCCESSFUL HIKING DESTINATION IN A LAND THAT WAS POORLY COMPATIBLE WITH TOURISM

THE BRUCHE VALLEY (FRANCE)

The Bruche Valley:

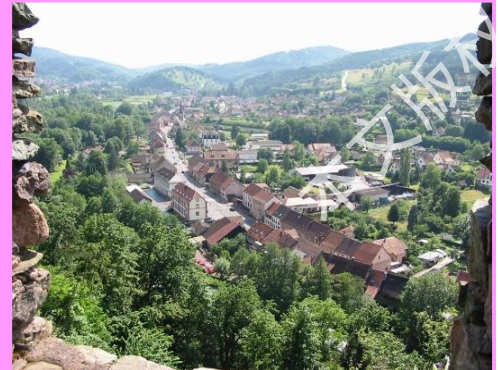
- Made up of 26 municipalities in a green and forested valley between the middle high mountains of the Vosges and the plains of Alsace;
- A formerly highly industrialized territory that lived off metal production, textile manufacturing, lumber plants, and stone quarries. This heavy industrial past is still evident in the many areas of wasteland that are not suited to tourism;
- A historic area that was strategically important during the First World War, which witnessed the violent Franco-German battles;
- Agricultural areas that have seen a decline in the amount of activity, allowing the forests to regain ground;
- Easily accessed by road, with an airport (30 minutes away) and a railway station close by, allowing for the possibility to rely on the public system;
- For 30 years it has been still a destination for nature, history, and vacations that attracts daily and weekend more or less visitors from the region's major cities and nearly neighboring countries (including **Germany, Switzerland, Luxembourg, and Belgium**);
- 2,500 commercial tourist accommodations, of which 32% are in cottage-huts, 26% in hotels, 14% in resorts, 11% in rentals, 10% on campgrounds, and 7% at B&B or farm stays;
- Many vacation homes are situated in the heart of a network of some 450 km of marked trails maintained by local hiking clubs (Club Vosgien, Club des Amis de la Nature, in partnership with the Federation française de Randonnée Pedestre);
- A tourism development pole that is a successful example of the implementation of an inventive and experience-oriented offer.

The lever of success for local tourism

There is no Mont Blanc on the horizon or no Eiffel Tower to visit. However, the Bruche valley lives off tourism by promoting a multitude of simple and charming heritages, which are intertwined in its history: memorial sites, religious buildings, architectural monuments, industrial remains as well as traditional and contemporary art. The valley has been able to preserve and revitalize its crafts, traditional trades and local gastronomy. Hiking has become the main means of discovery.

The drivers of this dynamic:

- A shared tourist office between municipalities and highly structured within a coherent territorial organization, with efficient local tourist companies that invest in the region;
- Expert support from two specialized design and advice offices was recently called upon after 30 years of inter-municipal tourism cooperation. Their unbiased analysis of the district's strengths and weaknesses in terms of offerings positioning, and organization has helped to redefine long-term objectives.
- Presence of a large catchment area with access to large outlying cities;
- Powerful, informative, free websites in French and German;
- The desire to involve the community in tourism development and profitability, a philosophy that reinforces local identity, a sense of belonging and pride. The local actors and the population are considered as partners in the welcoming of guests, with the tourist office as the driving force;
- A permanent adaptation of activities and accommodation to meet visitors' expectations;
- A strategic objective to make the valley a land of choice and excellence for hiking by developing services around this practice.



The challenges set by the valley's stakeholders for themselves with a projected outlook to 2028 are:

- To build a lasting brand for a destination that is favorable to personal trip and exploratory travel;
- To evolve from a "territory that organizes tourism" to a fully recognized "tourist destination";
- To evolve from a place with visitors passing through a destination for short stays by increasing the number of visitors who stay at least one night (with their expenditure per person at 141€ per day as opposed to 66€ per day for those passing through);
- To continually strengthen the adequacy of the offers with aspirations of the local market;
- To strive for a lower environmental footprint and more economical returns
- To increase the number and size of events

Targeted tourists' groups

The first target groups are "senior hikers", 60-years-old, contemplative, and active, young retirees, of mid-range profession and socio-professional category with a low budget, who are accompanying a loved one or their friends. The survey of this target group reveals:

- who are looking for nature trails, landscapes and a good quality/price ratio;
- who do not appreciate poorly maintained trails, bad weather conditions and overpriced services.

The secondary target groups are "Belgian seniors" and "families", who may visit for reasons other than hiking, but who are keen to go hiking during their stay.

The core concepts of the 2028 strategy are "building customer loyalty", "reaching the younger generation" and "winning the hearts and minds of new visitors".

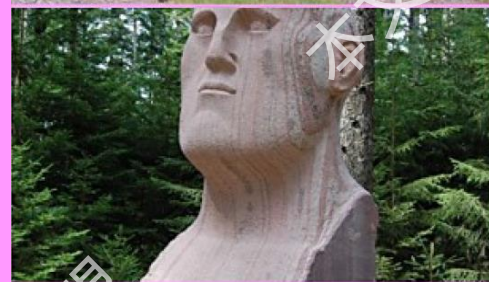
Hiking and touring activity

"Trail lovers, sports enthusiasts, people who like to explore or simply to stroll in their shorts, alone or in a group... To all those who like to be active, this site is the place for you! Leaflets for round trips or itineraries, practical information, heritage trails, and great tips..." is the description of the region from www.rando.bruche.fr.

There are dozens of hiking trips. Family-friendly hikes of under two hours, hikes of two to four hours for the hedonist, and hikes of more than four hours for the enthusiast. Many trails have been designed around themes and the choices are diverse:

- Nature trails: the pleasant forest trail; a panoramic route; a flora trail; a trail along the Bruche river, which is popular among people who enjoy fishing;
- Recreational trails; the discovery trail; the educational trail; the one marked by statues; and the one marked by legends of the past;
- Memory trails: the trails of the remains of medieval castles; the trails of Jean-Frederic Oberlin, the famous Protestant pastor from the valley in the 18th century; the trail of the bunkers of the First World War; the trail of the smugglers who guided the fugitives to escape the Nazi advance during the Second World War.

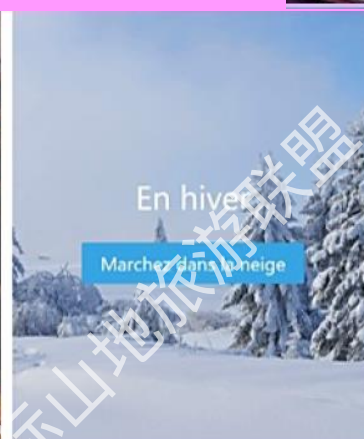
The biggest advantage of La bruche is that it knows how to value the fragile and invisible heritage "gems" because of its great creativity in the design of themed walks and hiking. The originality and longevity of this walking adventure is largely due to the strong involvement of the local residents over the past three decades.



In June 2020, in the context of COVID-19 health crisis, the local residents and tour operators worked on producing a one-minute promotional video clip that was highly engaging and was featured at valledelaBruche.fr with the slogans "Our welcoming people is in our nature" and "Everything is near, everything is ready", more than ever focusing on hiking and local tourism.

Bruche is also a site that looks for innovative examples for promoters of hiking development projects from other regions who want to be inspired by creative destinations.

(Sources: www.valleedelabruche.fr, www.rando-bruche.fr, stratégie touristique)

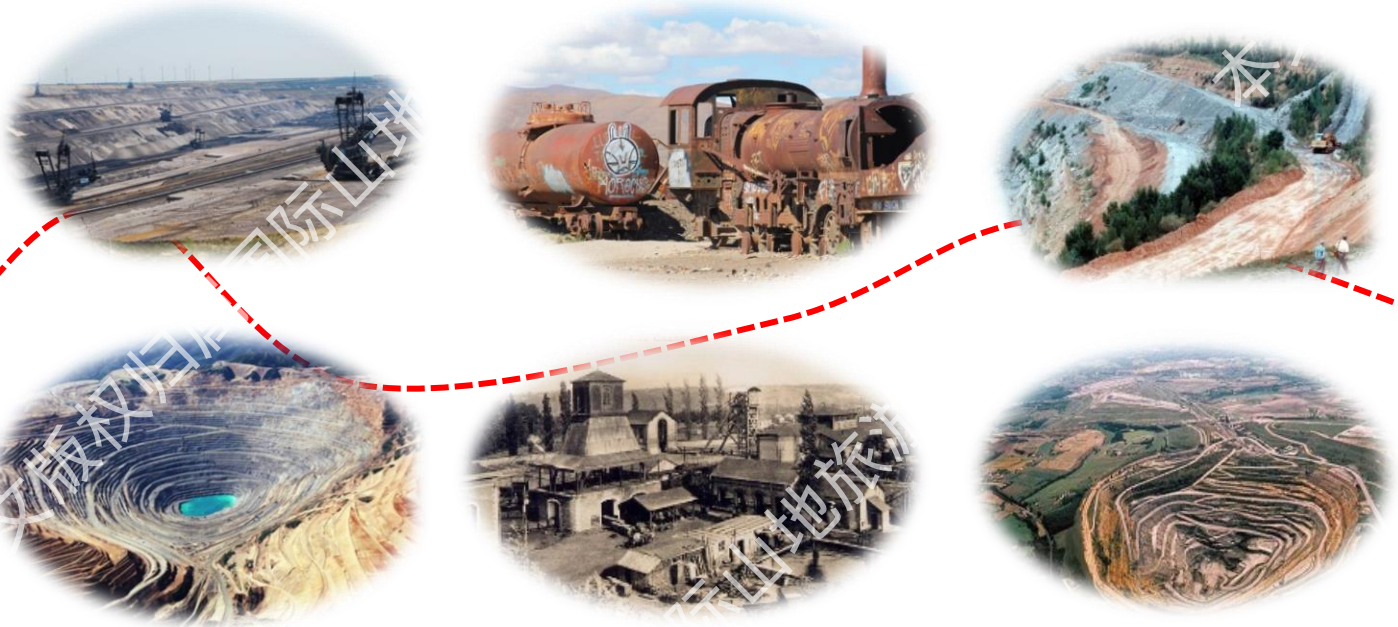






©Serge Koenig: Crossing a landslide chute on a trail in the mountains of the Kangding region (China 2016)

6.4 - Degraded space



Mines, quarries, and other industrial areas have often been established without proper planning for the long-term after operation. Those that are abandoned or depleted leave behind a disfigured landscape that sometimes even becomes an environmental threat to people and wildlife.

Along with this, the question of redeveloping abandoned sites arises, which must be done within a well-considered framework to restore the environment and the social and economic progress that is often affected by the abandonment of these sites.

Some sites have become tourist attractions or outdoor leisure centers with walking and hiking as an activity among others.

On a much smaller scale, but directly associated with hiking, the surroundings of a trail can be degraded by illegal trash dumping and waste cemeteries into the nature, or simply degraded by human and/or natural erosion.

Photo: Copper mine in Bingham Valley, Utah, USA; Garzweiler mine in Germany; Train graveyard in Bolivia; Old coal mine of Carmaux in Tarn, France

EXAMPLES OF WALKING TRAILS IN REHABILITATED INDUSTRIAL SITES

AN INCREDIBLE GREEN TRAIL FOR A OLD INDUSTRIAL RAILWAY LINE (UKRAINE)

When nature itself is the architect of tourism recycling of an industrial site, the result can be truly magical. This is the case of the Klevan railroad in **Ukraine**, which has been transformed into a botanical tunnel that has become a true international romantic pilgrimage for walkers and hikers. Here, there is no need for human intervention for maintaining and removing overgrown foliage, the slow passage of a few wagons will do the job.

The 4km long route has been named "the tunnel of love" and has become a "must-visit" route for visitors from around the country. It is open to tourists free of charge and throughout the year.



WALKS AND OUTDOOR RECREATION IN THE TRANSITION OF THE CARMAUX COALFIELD (FRANCE)

The largest open cast mine in **Europe**, called "La Decouverte" in the Tarn department of **France**, dates back to the 12th century and was finally closed in 1997. Faced with the loss of the most important local industry, the conversion of the site, supported by Paris central government at that time, was crucial to the future of the city. It was vital to turn the region's image around, to move on from this centuries-old manufacturing industry to something else. Four themes for the site emerged, with the aim of generating economic, social and cultural benefits: "sporting and leisure activities", a "commemorative" center, a "music and cultural festival" and "environment-friendly": with some 7,000 tons of soil moved, it received phenomenal backing in the shape of investments of 61.5 million euros when the project began in 2003.



And so, the one-kilometer square and 300 meters deep wound was reforested and transformed into an ecotourism and recreational park built around the lake at the bottom of the crater. The gigantic mining machinery now stands in the "Titans' Park", which has become a mining museum. The large buildings have been refurbished and are now dedicated to art and culture. The entire site covers 700 hectares and is crisscrossed by a 36 km long greenway, the "Chemin des mineurs", for walking and cycling. This is Cap'Decouverte, a "post-mining" destination in Carmaux with many attractions to be discovered and enjoyed.

The manager works closely with the local authorities to maximize the number of visitors and boost local economies. The site welcomes 130,000 people per year, 16% of whom are local residents, 30% of whom come from the surrounding towns and 54% from other regions. Walking in the area is free, while other types of entertainment have to be paid for. Activities such as dry skiing, chair lifting, the pedal boats, and water skiing are offered at a price between 2€ and 15€. The operation directly generates 200 jobs and another 1,000 indirect jobs through the establishment and/or expansion of companies in the region as a result of this new attraction.



Walking paths and trails that have been degraded by time and overuse.

Whether the erosion is natural, man-made, or both. The most affected roads correspond to the areas where the most contributing factors are present (steep slopes, altitude, friable substrate, lack of vegetation, traffic, etc.). The proximity of tourist facilities (ski lifts, lookouts, restaurants, etc.) increases the number of visitors to the trails, thereby increasing the risk of degradation.

Excessive pedestrian traffic inevitably leads to physical damage, which in turn can lead to other environmental problems, such as the destruction of vegetation on the trails. The repeated passage of hikers is accompanied by an acceleration of "natural" erosion linked mainly to water discharge (concentrated runoff, gully), snow cover, freeze-thaw cycles, and the effect of wind on crest trails. In addition, the effects of passing sheep/cattle herds and other recreational sports users (mountain biking, horseback riding, etc.) are also concerns that should be taken into consideration. Thus, we see appear more and more parallel routes, multiplication of paths, shortcuts, widening, and gully of trails.



The techniques for restoring a degraded area come down to a choice between quickly repair the trail to make it passable and stable again or building a new, more adapted, and suitable trail. The techniques chosen may vary according to geological, physical or climatic conditions; guiding tourists using cables along the trail to limit wandering; filling in existing ruts; replanting grass; channeling water runoff to avoid natural erosion and deterioration of unsettled vegetation; laying out new paths, taking into account the characteristics of the soil or the terrain; and installing a wooden walking section (preferred to concrete because it is perceived as being more aligned with the landscape). However paved trails (made of planks, asphalt, tar, resins, cement and so forth) are generally considered too much artificial by hikers, and they are compared with "highways for tourists."

Being aware of the effects of tourists and hikers on trail erosion is also an important factor for those involved in trail management and restoration. For example, "nature guards" can monitor the most eroded areas and instruct users to stay within the indicative travel range of the marked trails. Trail signs, information billboards upon the arrival station of a cablecar, brochures and trail leaflets, and various other forms of communication can be used to inform users of the consequences of erosion and how to stay safe.

To ensure hikers enjoy a good walking condition, trails must be maintained and rehabilitated regularly, including effective drainage of rainwater. And a key driver for tourist trails is to provide safe and pleasant walking conditions for hikers and walkers alike.

Example of cost for restoring a section of hiking trails

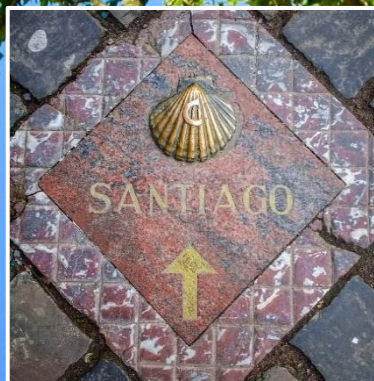
(Source: 2009 study "Erosion on hiking trails and their development in the Sancy massif in France")

Details of site	Roc de Cuzeau on the "GR30" trail.. Section length: 1040 m.	Puy de Clergue, on the "GR30" trail.. Section length: 1039 m.	Puy Ferrand between the area for cable cars and the Puy de Sancy, on an adjoining section of the "GR30". Section length: 100m.	
Year	2000	2004	2005	
Cost	41.000€	20.000€	150.000€	
Work commissioned	Remodeling of the old pathway and digging of gullies to drain water. Laying out a new spiral track.	Filling of trenches and ditches. Installation of waste disposal facilities and re-sodding. Laying out a new spiral track with steel cable stringing.	Drain trenches filled with pozzolan, at a slope angle to the old road. Installation of waste disposal facilities and re-sodding. Laying a new path with steel cable stringing.	





©Armand Ducornet erosion due to traffic, runoff of rainwater, and lack of maintenance (Belgium 2020)



©Rosemarie: the icon of the Compostela crusade that has become the trademark of trails, regions and businesses (Spain, France)

6.5 - From the trail brand to brand territory

Trails are reflections of the territory and represent its identity. In return, recreational and tourist trails can contribute to enriching the identity of the territory, and to spread, strengthen, invigorate, and energize the villages and municipalities they run through.

Apart from top destinations that are particularly spoiled by nature, in most areas brand-building through trails requires in-depth conceptual work.

Here is the story of three trails with different identities and how they organize their promotion.

EXAMPLES OF TRAIL PROMOTION IN AREAS OF THAT COMBINE NATURE, HISTORY AND AGRICULTURE

THE TRAILS OF SICOVAL (FRANCE)

Discover the trails of Sicoval, located at the gates of the city of Toulouse in the Haute-Garonne region. Sicoval is a joint community composed of 36 municipalities whose purpose is to coordinate the planning and shared development of their territories, which include both urban and rural environments with the purpose of improving the living conditions of the local community.

One of Sicoval's structural projects is to develop, maintain and promote a 350 km footpath network with walks and hikes that link the 36 villages in conjunction with the local authorities, associations, and farmers. Whether you are an experienced athlete, family walker, hiker, mountain biker, or horse rider, and whether you are a lover of history and culture or a naturalist, you will find a trail that suits your needs.

As part of its strategy for tourism, Sicoval relies on the formidable promotional factor that is its paths and trails. It evokes four geographical regions, emphasizing the unique cultural diversity and sense of identity brought by the paths passing through them, using a range of colors:

- **GREEN:** The section "Between Ariège and the hillsides" evokes Ariège, the cliffs and the luxuriant vegetation of the small valleys in a landscape of steep hillsides";



- **RED** The region "Les Chemins Tolosans" evokes the city center of the territory and of Sicoval, the outskirts of Toulouse city, suggesting rose-colored bricks of the houses and the connection with Toulouse city;
- **YELLOW:** The section "Les Collines de l'Autan" evokes the typical agricultural land of the Lauragais region, hills and slopes defined by wheat fields, under the influence of the Autan wind.
- **BLUE:** The "Les Chemins du Pastel" region evokes the typical agricultural land of the Lauragais region, with its architectural and rural heritage that harks back to the golden age of watercolor. This color plant, which enriched the region in the 16th century thanks to the export of its color throughout Europe, is one of the main attractions of the trails and an asset for local tourism.

Every year a event caled "Randovale" is organized, a sporting, and cultural day that links locals and tourists alike by means of hikes with a different theme set each year. Last year, residents and tourists set out to discover the history of the ancient capital of the Gallic people who were at the origin of the region's development, by walking through a reconstructed archaeological settlement. Legend has it that these Gauls participated in the ransacking of the Greek city of Delphi in 290 BC, which is believed to be the source of the wealth that propelled the growth of the city of Toulouse...



THE PATHS OF IMAGINATION (FRANCE)

The community of Carladéz in Ardeche has invested in the development of theme-based walking trails, designed by its 3,100 residents in the six founding villages. People are so involved that the region chooses to link these paths to its cultural identities.

The originality of the project, designed with the advice of a consulting company, is that it essentially calls upon the imagination of the local people, their knowledge of the territory, their craftsmanship, their desire to tell the local story and to put existing resources to use. For each trail, a group of residents was formed to choose a suitable theme and design concepts. Then, from the first concept to its realization, these "creative villagers" took charge of the implementation under the supervision of the coordinator and the consulting company. In the end, six theme-based trails were created: "Along the River", "From Magma to Stone", "From History to Heritage", "From Fire to Wind", "The Enchanted Forest", and "How a Farmer Created his Farmland". Tourists can thus discover the different facets of the territory through surprising works: wood or iron sculptures, old, recycled tools, reduced productions, inventive signposting, and so on... The trademark of this network of thematic trails has been chosen and registered as "Sentiers de l'imaginaire".

Three years after its launch, the project finally received financial support (US\$25,000) from the regional and local authorities. These investments allowed each village to organize the animation of its trail based on the global project and to launch a publicity campaign: brochures were published, the local press was solicited, and the word-of-mouth spread, which helped to spark the curiosity of tourists and the "Trail of the Imaginative" gained prominence. The concept has now been embraced by the entire region, arousing strong interest from other communities and a desire to do the same. "We were quickly envied for this concept of Imagination Trails because it allows the entire population to participate and it sets us apart by attracting the attention of the public to each community and to the territory as a whole," the elected president of the commonwealth told the local press.

Today, 10 years later, in order to anticipate a potential risk of the program running out of steam, the consulting company monitors the number of visitors, draws up reviews, and proposes adjustments and a continuous improvement plan. The villagers are fully engaged and contribute their views: the trails are not only socially and economically beneficial,



but also strengthen the inter-communal cohesion. So much so that the trails have naturally become part of the territory's signature: "Communaute de communes du Carladez - the land of the imagination trails".

The trail steering committee with representation from each village, created by Community Council Decision, manages investment projects that can reach US\$150,000 annually for the six villages, 80% of which are contributions from the region via a program called Leader (supporting the strategic direction of spatial development in rural areas) and by various European funds.



THE "SUCCESS STORY" OF THE KILKENNY TRAIL (IRELAND)

The Nore Valley Trail was created, developed and mapped a decade ago covering 34km in County Kilkenny. This concept includes hiking as the core of other excellent activities in the region. It has been designated as a "national trail" by the National Trails Office of the country's Ministry of Sports.

1- Name of the Trail It was necessary to find a name for the trail that was easily pronounceable, short, easy to remember and would evoke something meaningful so that potential visitors could easily find it on search engines. The Nore Valley Trail was named the "Kilkenny Trail" after the county renowned for its cultural, craft, culinary attractions, landscapes, forests, and rivers, not to mention its impressive 12th-century castle. All these local treasures are recognized by the trail.



2- Mode of Operation A non-profit organization, Trail Kilkenny, was formed to manage, maintain, develop and operate the trail. The organization is made up of representatives from the local government, the County Kilkenny Leader Partnership (which provides financial support for rural and communal development projects), the Kilkenny Recreation & Sports Partnership (which promotes healthy living and self-fulfillment), the local townships and landowners whose land is crossed by the trail.

3- A Branded Logo. As a way to better convey the brand, a straightforward, clean, and logical graphic design was chosen, easily transferable for marketing and branding purposes. The development of the trail aims to diversify different themes into a network that determines four colors to promote differentiation: green to identify the initial trail, red to represent all the hikes in the network, blue for the cycling trail, orange for the culinary discovery trail, and purple for the crafts discovery trail.

4- A formal ceremony was held to mark the official opening of the trail. The opportunity to open a trail with a newsworthy event for the media and the wider public was followed for the launch of each new route. This was again the case in October 2019 at the opening of the 7 km Grennan Loop Walk, the latest addition to this community network, with the Kilkenny authorities in attendance at a inaugural walk. The event was planned to nurture PR relationships with



journalists and bloggers to spread the word on social media. The Kilkenny Ridge Race, a 50-mile trail competition, is held yearly

5- Its Defined Objectives. The trail plan has outlined the following goals: to provide open and free access for the trail; to develop and promote the quality of life in the region; to offer a range of different trail experiences; to increase the number of visitors; to promote local services; to bring economic opportunities to the rural areas of the county; to increase awareness of the trail, and to attract new tourism and recreation market segments.

6- Awareness-raising tools In addition to the classic promotion on printed materials, news, special offers, new product releases, scheduled events, etc., everything you need to know about the Kilkenny Trails, including trail design, interactive maps, and downloadable guides, is available on the web and has become a place of consultation and exchange for Kilkenny residents. In today's world, all the information we wish for can be found online, and most of this can be accessed via phones. As a result, mobile apps for trails have become more prevalent and help showcase hiking locations and Trail Kilkenny has partnered with Everytrail Web to connect trails that span the globe. The application allows users to record their hikes on a map using GPS data, share geo-tagged photos, obtain statistics such as walking speed or altitude, download other hikers' routes for offline viewing, and much more. When it was first introduced several years ago, this application was praised for its forward-thinking nature. By being associated with this initiative, Trail Kilkenny has received a lot of publicity due to the conferences that have been held on this particular application, and also due to the large number of downloads of the application.

7- Gaining traction: the best sections of Kilkenny's trails were filmed in 2014 with the "Google trekker" allowing 360-degree views and sharing the experience with millions of people around the world on Google Maps, through phones, tablets, and computers: the first airing of European hikes using this new technology from the Google Street View service. The images were widely reported in various medias.

Multi-experience concept involving the community at all levels; a range of recreational and tourist packages for walking and cycling activities plus gastronomy and craftwork; an effective marketing approach oriented towards new technologies are the secret of the success of this project. This trail began as a community development initiative and has grown and evolved into a vital local amenity and a key contributor to tourism in Kilkenny.





KEY POINTS TO REMEMBER



A TREND TODAY: HIKING CLOSE TO HOME

7

This chapter deals with local tourism that can be practiced freely, spontaneously, and in various geographical settings.

The freedom to enjoy nature around home with a wide variety of leisure activities contributes to the "good life" of a territory and the good health of the residents. A healthy region also attracts entrepreneurs and city dwellers to choose their place of residence and participate in local development.

It is over all local tourism that gives life to local trails. Local tourism also constitutes to a more stable and sustainable basis of activity (economically, socially, etc.), more so than the segments of visitors coming from far away. Naturally, it has much less impact in terms of pollution and responds to the increasingly widespread popular awareness for "fly less" and "flyskam".

The Covid-19 crisis has encouraged the explosion of this local tourism and could be the accelerator to reinvent the sustainable future of tourism.

CHAPTER SUMMARY

- 7.1 "Pocket Adventures" at Doorstep
- 7.2 Nature, Hiking and the Covid



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7.1- "Pocket Adventures" at doorstep

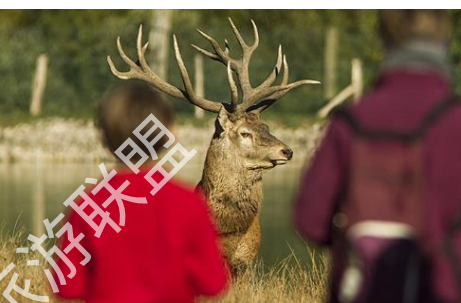
Among the trends that are currently on the rise, we must mention "micro-vacations", "micro-adventures" and other "pocket adventures" which reinvent local travel and aim to break the daily routine for a few hours or a weekend. Our goal is to rejuvenate in nature and / or visit our area in less time than long-distance travel, so it is more frequent, closer, and more personalized. It is also an opportunity to invent yourself and enjoy unique experiences close to home.



This concept of regional alternative tourism was theorized in 2012 by a British backpacker who had traveled the four corners of the globe. He has founded the website <https://alastairhumphreys.com/> and the concept is reflected in the slogan: "simple, close to home, spontaneous, in the open air, cheap, and where nothing is set in stone".

The breeding ground, already fertile with certain audiences before the outbreak of Covid-19, has led to countless initiatives in the face of health and safety constraints because the virus. There are countless blogs, websites, and books covering this topic in **Europe, South America, Australia** and elsewhere. In **France** for example, www.chilowe.com was launched by an adventurer who had traveled from **France** to **Cambodia** by tricycle. Another website, www.2journspourvivre.com was created by a communicator-entrepreneur who also runs a Facebook group called "The weekend incubator", which she presents in a book called "2 jours pour vivre" (2 days to live) (Gallimard Leisure Publishing House, 2019), and many others. <http://www.2journspourvivre.com/>

Hiking is an up-to-date practice, consistent with all these distant alternative trends of mass and far tourism. It is, along with other leisure activities and nature sports, a constant in these circuits which advocate the use of public transport and soft outdoor tours.

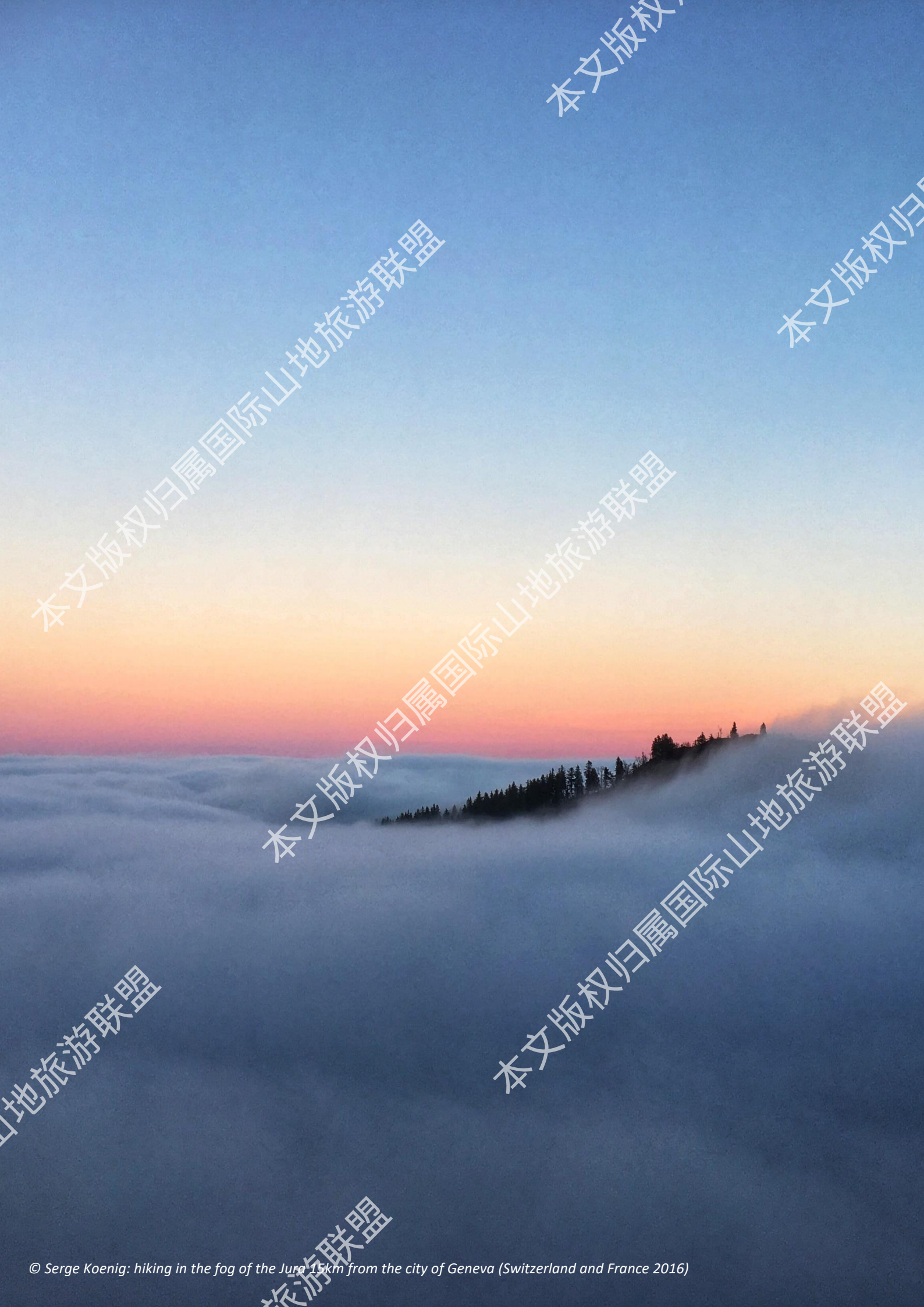


For the French writer-walker, Olivier Bleys, the man behind <http://olivierbleys.com/> and book "Pocket Adventures" (Hugo & Cie Publishing House, 2018), anything can inspire to take a break of a few hours to get away from the daily routine. He shares stories of bivouacking under the stars in a meadow near home, going to the woods and listening to the slab of the deer during the mating season, discovering the paths of his own region on foot, walking for 24 hours non-stop, stopping just for a picnic or a 15-minute nap. A hike without using bridges to cross the river, or a night hike in familiar terrain, when the landscape takes on a new incredible flavor. He, a member of the Society of French Explorers, likes to quote Marcel Proust, the famous writer from the beginning of the last century: *"The real voyage of discovery does not consist in seeking new landscapes, but in seeing with new eyes."*

Jean Viard, a French sociologist specializing in free time and research director at the National Center for Scientific Research (CNRS), explains that *"what has changed is that we know the world by heart, either because we saw it on TV, because we went there, or because our parents or friends went there. Somehow, we are in the third generation of mass tourism, so the family has already visited the most magical places. The idea of discovery is no longer the same. In fact, we opt for proximity and above all, we live experiences"*.

This concept does not target top destinations. It is mostly carried out in places with peaceful atmosphere and away from the crowds. Micro-trips associated with hiking, horseback riding, or cycling allows us to take time to be attentive to the details of what surrounds us...

The success of these local trips is encouraged by the cross-checks of the digital tracks posted by connected practitioners,



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7.2- Nature, hiking and the Covid

The Covid-19 pandemic has made citizens reflect on the use of their free time and the necessity of satisfying one's need for nature. Because of the pandemic, mobility has been severely restricted and regulated across the globe. In many countries, this year's hiking has experienced hours of glory. Urban green parks and domesticated natural spaces have become veritable oases. The year 2020 exacerbated the attraction of hiking and boosted the value of nature.



WALKING IN NATURE: SOME OBSERVATIONS IN DIFFERENT COUNTRIES

In this context of limited access to open spaces close to home during and between periods of confinement, the national jurisdictions of various countries have dealt with these matters very differently. Parks and natural sites have been completely closed in some places (e.g., **Quebec, Canada**), while in other places, access and activities have been maintained and allowed in compliance with social distancing measures (e.g., **United States, France, New Zealand**). *(Sources: Nature, Recreational Tourism and Covid-19 by Falardeau & Hersberger).*

Many parks, beaches and other recreational tourism areas have been closed and some of those that were kept open got overcrowded, making it hard to enforce social distancing. People demanded accessibility for all in all natural spaces, a demand that was the subject of popular consensus. The arguments shared were that nature, with wide open spaces, enables social distancing, while walking contributes to the maintenance of good health, strengthens the immune system, and prevents psychological stress.

Following the hygiene instructions, the society has adapted. Covid-19 has changed the accessibility to places and the practices of walking and other sports, but it didn't stop them. The accessibility to paved roads and the little equipment required for its practice have even reinforced the universality of recreational and sport walking. The situation has also highlighted the influence of social-political-economic conditions (especially public health measures) on the demands of activities and nature.



Banks of the Seine in Paris - France during the Covid-19 crisis

WALKING AND NATURE AT ONE'S HOME

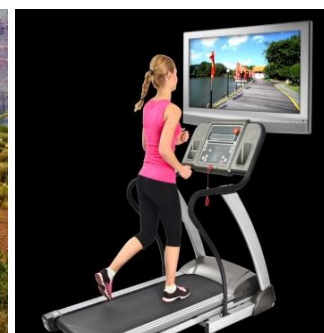
Meanwhile, people have a strong demand for the non-material experience of nature and hiking. Digital initiatives such as virtual tours of nature reserves, live streams, podcasts, and online educational activity portals have thus proved to be alternatives for people deprived of real nature.

For example, while Yellowstone Park (**USA**) was closed due to the pandemic, it was possible to take a "virtual hike" (by video) on the deserted trail leading to the Dragon's Mouth Spring geyser. The idealization of the natural experience was thus replaced by these experiences of a virtual and non-physical nature during these periods of confinement.

Others were also isolated at home and chose physical, indoor and virtual activities. Garmin, a manufacturer of sports accessories, specializing in GPS navigation equipment, released a report in 2020 on GPS data transmitted by carriers of smart mobile devices, which highlighted a relationship to the territory and a consumption of leisure activities strongly influenced by Covid-19 prevention measures. Outdoor activities have been replaced by indoor and virtual ones, while at springtime, the reverse is usually the case.

For example, confined at their homes, many citizens of the **United States** had thus replaced their outdoor activities of hiking and running with devices for "indoor + virtual" walking and running (see the photos below): these virtual activities saw a rise of 18% during the confinement, compared to the same period of 2019.

Virtual running is now available on the Forerunner 245 series and Forerunner 945



The practitioner practices or trains physically at home, and thanks to an application, moves at the equivalent pace in a virtual world (Zwift) or on real trails (Tacx training app, Kinomap) connected on a screen: the indoor activity takes on a playful dimension.

During this spring period of 2020 in **Europe**, while physical activity was practiced mainly indoors in **France**, it was practiced more outdoors in **Italy** and **Spain**, and especially in **Germany**, **Sweden** and in the **United Kingdom**, which were subject to "more flexible" confinements (*sources: Garmin 2000*).

The guideline "stay at home or close to home" has greatly restricted what we associate with tourism: explore further - cross borders - meet people. Meanwhile, nature appeared to be a vast, safe and free space. In contrast, public places, offices, and shopping malls have become synonymous with sources of contamination, increased health risks and meeting places to be avoided (*sources: Quebec Nature, May 2020*).

The influx resulting from the reopening of nature areas confirmed this outbreak of enthusiasm. For example, in **Canada**, the limited quantity of annual access cards, offered at half price, to national parks near major cities, quickly found buyers. This promotion (50% reduction) on admission tickets was one of the government measures to encourage "local tourism" and the return to nature. The speed at which the cards were sold clearly testified to the appetite of Quebecers for nature as well as the relevance of using natural spaces as social and tourist levers (*sources: Radio-Canada, 2020*).

The tourism crisis associated with Covid-19 could in the long term contribute to a desire to (re)discover one's own region, and promote equitable and managed accessibility, for all, to nature and hiking trails.

Campaign: "THIS SUMMER I VISIT MY COUNTRY"

On June 19, 2020, the French agency for international tourism promotion, Atout France, launched a campaign announced by the Prime Minister, aimed at selling the regions of France to the French. This internal and 100% digital marketing operation relied on social networks and websites, under the hashtag #ThisSummerIVisitFrance.

The concept of this campaign was to introduce regions to seven influential French people on the Internet, creators of content specializing in travel and a with huge following, who then shared their testimonials and photos on their respective blogs. Objective: to provide ideas and attraction of local holiday destinations.

The operation made it possible to produce and distribute 300 photos, 200 stories and 16 videos from the regions, which reached 15% of the French population on social networks. The videos were viewed on the Internet by 31% of the French population.

Nature and hiking were a part of the activities promoted...

(Source: Atout France)





KEY POINTS TO REMEMBER





THE "++" HIKES THE "++" TRAILS

8

Designing an original offer of trails or thematic hikes is a field of creativity that will be explored further in this chapter.

There are indeed a thousand and one ways to hike.

This search for originality makes it possible to develop alternative models to mass tourism, which is increasingly being questioned for its negative impact on the environment and the quality of experience offered.

These alternative models are tools of distribution in space and time, of user flows as well as of all possible forms of impact. Their development makes them a significant and inclusive activity in the economic and social weight of responsible tourism.

These thematic hikes are virtuous products that each territory can make in their own ways appropriately.

CHAPTER SUMMARY

- 8.1 The "++" Hikes
- 8.2 The "++" Trails



8.1- The "++" hikes

These "++" hiking products do not require any particular arrangement of nature or trails, nor do they need any investment other than time, imagination and creativity to design original hiking offers.

Innovative agencies, guide-botanists, hikers-geologists, teacher-biologists, naturalists, artists, storytellers, or specialists in various disciplines of well-being and personal development thus offer to design outings, holiday, and pedestrian courses in diverse and innovative ways by combining hiking with other popular and complementary activities.

This process is another way to live the aesthetic experience of walking and learn about yourself and your surroundings. This conceptual approach to the activity opens the way towards many possibilities for the development of hiking, including on trails in areas of weak appeal.



EIGHTEEN THEMES OF "++ HIKES"



Hiking + geology + heritage

Let you better understand the territory you walk on...



Hiking + botany + wild picking

Help you relearn ancestral popular knowledge and learn how to distinguish the fruits of nature, including berries, plants, mushrooms...



Hiking as animalists

Learn how to penetrate the natural habitats of wild animals to observe them without disturbing them...



Hiking + storyteller of stories and legends

Learn how to wander in nature and immerse yourself in local mythology...



Hiking + transhumance

Share the paths that shepherds and cattle have taken for centuries...





Hiking + delicacies

Combining the pleasure of walking with the taste of local culinary products...



Hiking + photography

Learn how to spot the right subject for the perfect photo, trigger and immortalize...



Hiking + watercolor

Learn how to draw your hiking trip on a white sheet of paper, while taking time to look at the details and mix the colors...



Sensory hiking + forest bathing

Learn how to immerse yourself, browse and experience the forest with therapeutic virtues...



Hiking + meditation, yoga, tai chi...

Learn how to improve your physical and mental well-being by supplementing walking with sequenced breathing, stretching, balance exercises, introspection...





Hiking + singing

Learn how to sing and express the aesthetic emotions concealed in nature...



Night hiking

Walk in the twilight, travel in under the only moonlight, and witness the sunrise on the horizon...



Hiking + stargazing

Dive into the infinity of space, recognize the constellations and reconsider the measure of who we are in the universe...



Walk + bivouac under the stars

Simply live the experience of sleeping outside...



Hiking + orientation

Learn how to familiarize yourself with the use of the various guiding instruments and techniques so as not to get lost...





Hiking + paragliding

Alone or in tandem

Combine the pleasures of walking with those of flying...



Hiking + fishing "without killing"

Catch the fish just for fun and release it back into the water...



Hiking + survival

Experience the "resourcefulness" that our ancestors used to survive...



Etc.

"++ HIKE" : COMMUNITY HEALTH PROGRAMS

Some countries are investing to move people out of their comfort zones and encourage them to exercise more. The political priorities are reflected in the creation of nature parks and trails dedicated to health, associations and foundations, organizations of thematic outings, Etc...

EXAMPLE OF A PROGRAM SUPPORTED BY THE STATE OF A COUNTRY



"ACTIVE IN PARKS" IN THE REGION OF VICTORIA BARWON (AUSTRALIA)

This is a flagship program of the "People and Parks" Foundation developed with financial support from the Medibank Community Fund Bank, the parks in Victoria and Barwon, and Medicare Local community health services.

The initial objective of this regional program is to make residents more active and become actors of their well-being through "outdoor" practices. This program then spread across Australia, with state grants to support local governments and community groups to help their residents play sports in nature..

Among the many activities organized, we want to highlight:

- *The popular walks of "heart walking groups" for sharing the passion for healthy hiking;*
- *The free hikes of "women's body-positive hiking" for overweight people;*
- *The personal adventure training to stimulate the body on steep trails and with physically demanding exercises;*
- *The actions in favor of the environment such as the restoration of sand dunes that the trails run through, or the reintroduction of disappeared indigenous biodiversity in sensitive natural areas.*

(Sources: www.activeinparks.org)



"++ HIKES" WITH PACKSADDLE ANIMALS

Farmers and ranchers who love hiking educate farm animals to become excellent and affectionate partners when hiking, carrying luggage. They are raised in the great outdoors, fed with natural fodder, regularly monitored for care, and are completely comfortable around humans. The most frequently chosen animal is the donkey. *Share your outing with an unusual and delightful companion...*



EXAMPLE OF A HIKING ORGANIZER WITH PACKSADDLE DONKEYS



"HIKE-DONKEY-JURA"
(FRANCE AND SWITZERLAND)



The managers of this association are lovers of nature, hiking and animals, and have raised 20 donkeys to make them true "professional" hiking guides. These long-eared companions are called Oscar, Nanon, Kebab, Tulipe, Voyou, Charlot... and each summer they travel the trails with hikers for outings with family, friends, and school students for one or several days, sometimes even several weeks.

Before the hike, the breeder prepares the planned route with the walkers, introduces them to the animal, and teaches them how to take care of it, how to feed it, how to prepare the saddlebags, and how to use the necessary equipment. Each donkey is provided with the equipment for carrying things and driving the animal (pack, saddlebags, and ropes), a donkey care kit, a tarpaulin to protect the luggage from rain, a guide booklet for driving the donkey with the group, as well as a list of places that can accommodate both hikers and the animal overnight.

Each donkey can carry between 40 and 50 kg and is suitable for three to four people. Young children can even get on the donkeys' backs when they are tired. Renting a donkey cost between 30€ and 60€/day.

The "French Federation of Donkeys and Hiking" (FFDH www.ane-et-rando.com) founded 30 years ago brings together around sixty trekking donkey rental companies (in a French market which covers around 150 animal rental organizations for this activity). The members of this federation provide a total number of 60,000 "donkey days" each summer with groups of walkers.

(Source: FFDH)



"++ HIKE" WITH STOPS AT THE FARM

Hikes in rural and mountainous areas can combine stops at farms, inns, and stopover lodges: these stops are ideal for walkers seeking authenticity. This is an opportunity to indulge in early learning activities for children through many manual activities (milking cows, gardening, growing vegetables, etc.) while the parents can enjoy local food and experience life on a farm. *Live like a farmer for a few hours...*

EXAMPLE OF A STOPOVER FARMHOUSE FOR HIKERS

FARM INNS IN THE VOSGES-ALSACE (FRANCE)

A farm-inn is a catering place, with or without accommodation, arranged on a working farm. It is based on the combination of tourist activity (auxiliary profession) and agriculture (main profession). The welcome is friendly and authentic, a testimony to rural and mountain hospitality.

In this region of northeastern France, pastoralism has been practiced since the 9th century. Farmers from the valleys bring their herds to the farms on the pastures of the ridges of the Vosges mountains, following the same paths for centuries.

With the creation of "Vosges Club" for hiking in 1872, the first leisure activities of walking on trails and mule tracks were developed. Hikers began to frequently visit these farmers, who had become innkeepers. They served visitors with drinks and other farm products (cheese, bacon, etc.), having their vocation as producer-breeders in parallel with that of hospitality.

With the passage of time and the birth of green tourism, the activity of welcoming tourist hikers has grown in importance, leading farm inns to develop, expand and modernize. While the farm-inn formula was initially a way of breaking through the isolation, it has become a means of bringing the urban world together with the rural world while providing additional income.

More than ever before, the inn has become an extension of agricultural activity. The gourmet menus offer visitors fresh agricultural, dairy, and meat products produced on site, along with traditional specialties. These farms are real favorites for visitors, and for some, it is even the main focus of the hike.

The local association of farm inns founded in 1971, that brings together roughly fifty establishments' structures and promotes this vocation of hospitality on the Internet and among tourism professionals. The labeling of farm inns around the marketing concept "One farm, one hike!" was recently developed by this association in partnership with regional parks. This concept contributes to the promotion of hiking in general since it offers visitors who come by car, walks before the meal (aperitifs) or after the meal (digestives), with an easy technical level and a duration not exceeding one to two hours. The idea is spreading to the entire Vosges massif under the impetus of the region's tourism services (Alsace Tourism Development).

Source: ATD Alsace Tourism Development, <http://www.fermeaubergealsace.fr/>







8.2 - The "++" Trails

These "++" trail products generally require special arrangements to create the attraction that is based on the history of the site, local stories, learning about nature, ephemeral outdoor art exhibitions, etc. The ethic of these concepts is, however, to create light and impact-free amenities, harmoniously integrated into the environment.

These "++ trails" products are based on playful arrangements which are sometimes led by staff who welcome, demonstrate, and explain. Depending on the level of investment and the mode of management, these short, recreational trails are often chargeable to the visitors.

it's yet another way to experience walking and learning. This conceptual approach to educational and artistic development also opens many possibilities for the development of community and tourist trails, including on lands of weak appeal.



THE EDUCATIONAL "++ TRAILS" FOR FAMILIES, SCHOOLS, TOURISTS

When the trail becomes a learning support. There are three different development levels:

- The interpretation trail (refer to P2 - Chapter 6) on scientific, historical, or cultural themes (some of these trails are free to access and others require an entrance fee);
- The educational trail marked out by numbered terminals, milestone after milestone, referring to the content described in a brochure in the possession of the walkers (which they buy before starting the walk);
- Walks or school classes in the heart of nature supervised by a facilitator/teacher.

Interpretation trails

Learn and acquire new knowledge while walking...



School outings, with groups of children, hiking or classes in the forest

Let trees and the great outdoors replace the classroom...



EXAMPLE OF A NATURE & ARCHEOLOGY EDUCATIONAL TRAIL AND SITE

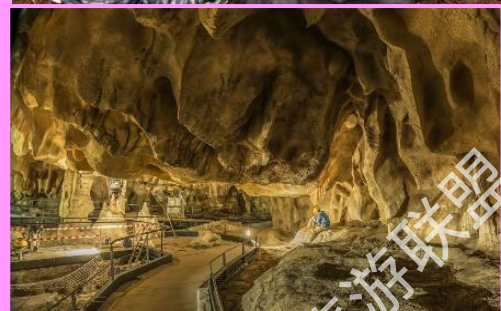
EXAMPLE OF A NATURE & ARCHEOLOGY THEME TRAIL (FRANCE)

Thematic interpretation or educational walking trails are very useful near tourist sites such as park houses or eco-museums. These trails are different from usual hiking routes and the expectations of hikers. They are much shorter and more comfortable, they allow visitors (in particular tourists, residents, families, seniors, schools, etc.) to deepen their discoveries during fun and educational walks. This is the case of the paths that crisscross the very touristy forest and archaeological park of the Chauvet Cave in Ardèche.

The small network of paths is organized around a full-sized reproduction of the Chauvet Cave with its faithful copies of frescoes dating back 32,000 years. The original cave, a real archaeological treasure of the Ardèche department, discovered by chance by enthusiasts of speleology and hiking, is closed to the public to preserve its interior microclimate and its rock drawings.

The walk passes through the man-made cave for a guided tour, through the museum with an explanatory film, and then outside on the path through trees dotted with eco-museum elements. This tourist project with its shop, derivative products, restaurant, entry ticket office (US\$20 per adult ticket), activities, and facilities, was financed in 2012 as a whole by the department (US\$15 million), the region (US\$15 million), the French State (US\$12 million), Europe (US\$10 million) and private sponsors (US\$4 million).

In the peak season of summer, the site attracts many tourists generating 70 direct permanent jobs and 500 indirect jobs.



EXAMPLES OF A OUTDOOR SCHOOL

IN DENMARK, THE FOREST IS THE CLASSROOM!

20% of nursery schools, or about 700 colleges, offer education in the middle of the woods. This school model, called "skovbørnehaver" ("forest kindergartens"), has existed in Denmark since 1952. Summer and winter alike, the children are outside, hiking, building wooden huts and climbing trees: a tradition of Denmark. Children, between three and six years old, not only learn to decipher the alphabet and learn to count in the middle of the greenery, but also to prevent danger and develop self-confidence and leadership skills. Above all this, the forest is an ideal playground and children are free in their activities, but under the supervision and guidance of their teachers. This school model has received great praise from parents.

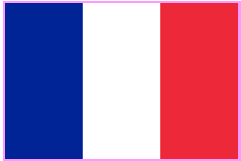
According to studies by Swedish biologist Patrick Grahn, children in daily contact with nature are less sick, more sociable and have better concentration. These skovbørnehaver are subsidized by the state in **Denmark**. The concept was exported to **Sweden** in 1980 for the elementary schools, to **Germany** in 1993, to **Switzerland** in 2000. School projects geared towards daily outdoor learning are also taking place in the **USA, Canada and England**. However, these daily teaching methods in nature are still marginal, even if many countries practice occasional outdoor school trips and trips for "green classes" and other classes with a change of environment.



THE "++ TRAILS" THAT BRING HISTORY TO LIFE

Ancient castles or fortifications, old trade routes, smugglers' paths, trails, industrial heritage, relic of war events, earthquakes or other events that have marked the past are all themes that can be associated with hiking. Travel while walking in the beginnings of history...

EXAMPLE OF A HISTORY TRAIL

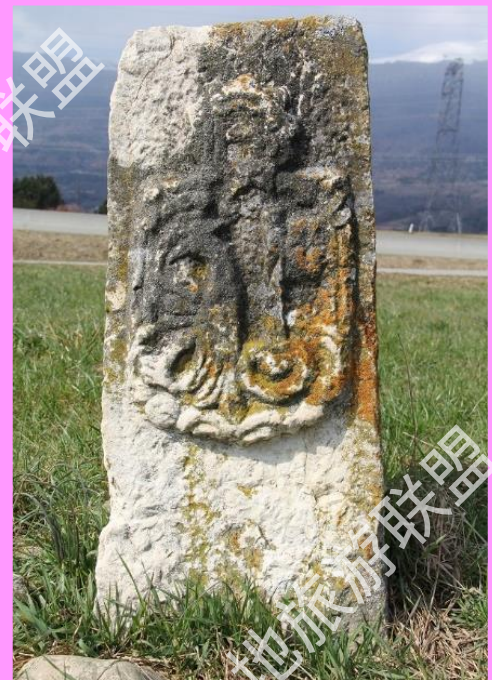


THE PATH OF BORDER MARKERS (FRANCE AND SWITZERLAND)



There is no need to walk around imposing fortresses to enter the stories of history. The Franco-Swiss Jura massif in the Pays de Gex overlooks Lake Geneva. It is here that hiking enthusiasts, in collaboration with the relevant municipalities of the two countries, have mapped out a 15 km hiking route for a four to five hour walk along the border, passing through fields, vineyards and forests. The panorama of Lake Geneva and the distant Mont Blanc massif add to the attraction of the area. However, the originality of the trail lies elsewhere; it connects the ancient boundary markers in stone anchored in the ground in 1766 and 1819...

Each of these boundary stone markers represents part of a multidimensional puzzle of topography, history and politics. With different shapes, they catch one's eye or arouse one's curiosity. On the Swiss side, they are stamped with a "G" for Geneva. And on the French side, with a lily flower. The history of these stone markers is as captivating as it is full of anecdotes. Explanatory panels have also been placed next to the first and last markers of the trail. The marked route, on a dirt and gravel path is easy to walk and free for all. It is usable on foot as well as by mountain bike and dotted with numerous benches.



THE ARTISTIC "++ TRAILS"

Artists, sometimes in cooperation with local artisans, visitors, and students, enliven the edges of the paths with ephemeral works made from materials taken from nature, and celebrate the landscapes in a form of outdoor exhibitions. New creations are regularly made to renew the attraction. *Awaken your senses...*



The concept of nature & art trails has spread around the world: in Tickon in Denmark... in Chaumont sur Loire and Gorneton in Isère in France... in Orenco Woods Nature Park in Oregon and in Eau Claire in Wisconsin in the USA... in the Schorre park in Belgium... in the Hamsterley forest in England... in Civitella d'Agliano and in the Val di Sella in Italy..., just to name a few.

EXAMPLE OF AN ARTISTIC TRAIL

THE ARTE-NATURE TRAILS OF VAL DI STELLA (ITALY)

The project was initiated in 1986 by a local philosopher and artist who loved art and nature. The Arte Sella association was created and rooted at the local level, supported by cultural institutions, involving Italian and foreign artists and craftsmen and the population of the region to develop the concept of "art in nature".

The association is located in a former rural stable-dairy-cheese factory, which was formerly used by farmers and shepherds. The building has become the center for management of the "Arte Nature" trails, documentation and auditorium, as well as a popular place for concerts and plays, creative workshops, photo exhibitions and catering.

Since then, there have been about 60 works of art in the forest, using non-artificial organic materials, such as wood, stones and living plants, which mark out two paths of 2 km going through the forest, meadows and pastures. These artistic creations are thus immersed in the cycle of life and nature where they were born; they change with the moss, wind, rain, and sun before they die and return to earth.

This unique artistic collection renewed each year with four or five new creations, has become an integral part of the local heritage and economy, attracting tourists and internationally renowned artists. These hikes are now a place of exchange with intercultural and inter-community encounters, captivating an audience of curious people and urban walkers as well as passionate hikers.

Entrance ticket price: 8€ for adults, 2€ for school students



THE HALF-HIKING, HALF-CLIMBING "++ TRAILS"

The development of these trails is on the edge of hiking activity since they require a minimum of individual climbing safety equipment (harness, lanyard, helmet, etc.). These routes cross cliffs on narrow paths that sometimes break off to give way to a series of rungs anchored in the rock. The safety is provided by a cable that runs along the route and to which the hiker is connected.

EXAMPLE OF A HALF-HIKING HALF-VIA FERRATA TRAIL



THE VIA FERRATA FROM PINGLE TO CHENGDU (CHINA)

This project was initiated in 2009 by the Franco-Chinese Cooperation Alpes-Sichuan and supported by the Chengdu Tourism and Culture group in Sichuan. The ancient village of Pingle, famous for its traditional character, was already a popular destination for residents of the region coming to spend weekends in the countryside.

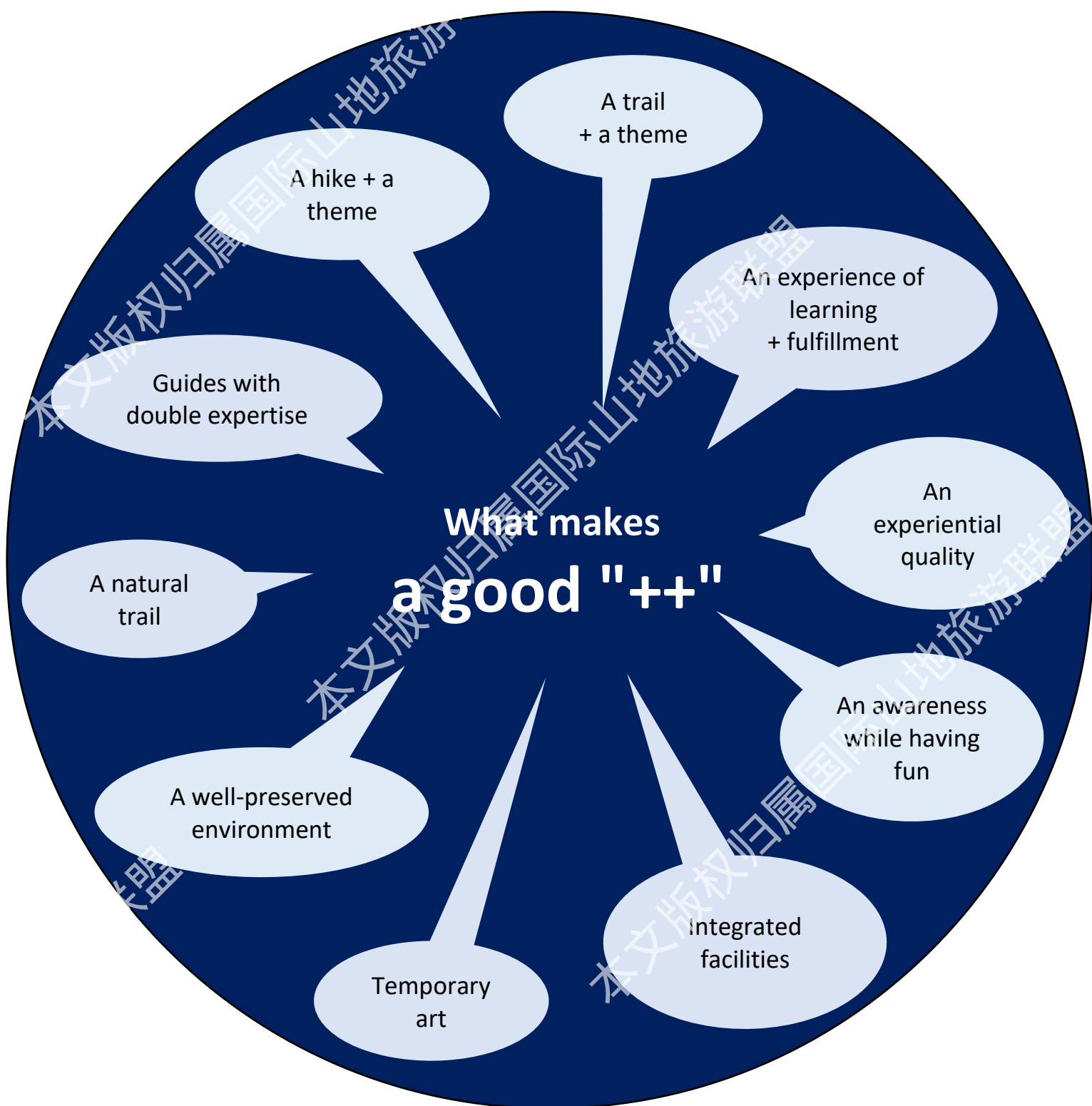
*With the aim of diversifying leisure activities, the operator has launched the first tourist via ferrata in China. It was open to the general public in 2010. The route is a perfect compromise between hiking and climbing, in a red sandstone canyon above a sea of bamboo: an exceptional wild site only 80 km from the megalopolis of Chengdu (1 hour by highway). Individual equipment is provided with the obligatory guide for each group. The ticket costs 75 RMB (US\$10). The example was then followed by many sites and **China** currently has around twenty tourists via ferratas.*

*Such historic development has taken place in **China**. The Taoist Trail in Huashan, Shaanxi is centuries old. The Medicinal Plant Gatherers' Trail in Xianju, Zhejiang is a few decades old. In the West, the via ferrata was born at the beginning of the 20th century with paths made of metal to enable the army to cross the Alps during conflicts. There are now more than a thousand via ferratas in **Europe** generally free to access as it represents a strong tourist attraction for the communities that manage them.*





KEY POINTS TO REMEMBER



TYPES OF HIKE AND HIKE

9

The types of trails and hikes allowed to be designed in the area, as well as the profiles and expectations of trail users, are key elements in formulating this pedestrian activity development policy.

The field is diverse and nuanced. Globally, two major user groups and trails stand out:

- Users who live locally and who can access community, recreational and local trails in a short time;
- Users who live elsewhere come to use tourist trails as part of their vacation or weekend outings.

This chapter presents the great diversity of the main characteristics of trails, hikes, and users.

CHAPTER SUMMARY

- 9.1 Typologies of Hikes and Trails
- 9.2 Categories of hikers



9.1- Typologies of hikes and trails

9.1a According to the distance

Short hike

- Walking time: < 4h
- Distance: < 15km

One-day hike

- Walking time: > 4h
- Distance: 15km to a few tens of km

Long distance hike

- Walking time: 2 to 7 days

Very long-distance hike

- Walking time: > 7 days



Route distance and effective walking time are one of the main factors determining the classification of the hikes.

They can be calibrated in four distance levels. This classification differs significantly between regions and countries while being based on the same principles.

The distance does not indicate the difficulty. A short hike may be accessible to the general public as well as reserved for experienced walkers depending on the technical difficulties. Likewise, a very long-distance hike can take place on a comfortable path as well as on rough terrain.

It does not indicate the effort required to complete the route. This effort will be not the same at sea level as at an altitude of 3,000 m. In addition, the distance can be covered at the slow pace of seniors or the high pace of speed-hikers or trail runners, significantly changing the intrinsic level of effort required.

The distance and average time needed to travel a trail are generally indicated on the markers and in the information materials on the hikes. The walking times indicated are generally calculated on an average walking speed for an adult hiker of average level (see the table below).

Ph: Hiking in the Alsatian vineyard (France); Hiking in the Bavarian pre-alps (Germany); Trekking of the Tiger Gorge in Yunnan (China); Annapurna Tour (Nepal)

TABLE: indication of the walking speeds of hikers

Hiker level	Walking speed on flat ground (distance)	Walking speed in climbs (altitude difference)	Walking speed in descents (altitude difference)
Beginner and lightly trained hiker	1.5 to 2.5 km/h	150 to 250 m/h	300 to 400 m/h
Intermediate hiker in average physical condition	2.5 to 4.0 km/h	250 to 350 m/h	400 to 550 m/h
Experienced hiker in good physical condition	> 4.0 km/h	> 350 m/h	> 550 m/h

(Source : www.hautes-vosges-randonnees.com/; www.montourdumontblanc.com/fr/il4-tmb_p27-connaitre-les-temps-de-

EXAMPLES OF TRAIL TYPES OF DIFFERENT LENGTHS



THE FORMER TRACK OF CAMINITO DEL REY IN ANDALUSIA (SPAIN)

This short hike on an artificial construction is in Spain, with a duration of approximately three hours of walking for 8 km of distance. However, it is not easy. Considering the obsolescence of the facility and the lack of security, it even has potential dangers. The course is dedicated to expert walkers capable of ensuring their own safety.

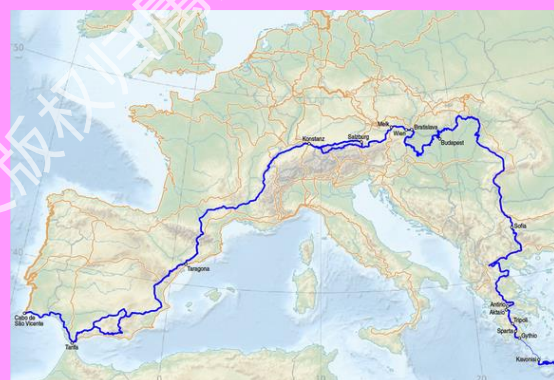
For tourists and other hikers, a new parallel and secure artificial path has been put in place.



"E4" - THE LONGEST E-PATH TRAIL (EUROPE)

This very long-distance hike (10,450 km) is technically easy, frequented for pleasure by passionate walkers of all ages. It is suitable for people fond of "slow travel" who sometimes wander for several months, at their own pace, to cross the continent and appreciate its cultural and landscape wealth. These, called long-distance hikers, are vacationers, active retirees, but also new travelers who decide to travel for a long time while working during the stopovers, becoming "digital and connected nomads".

This remarkable route implemented by the "European Hiking Federation (refer to P1 - Chapter 5) begins in Portugal and crosses Spain, France, Switzerland, Germany, Austria, Hungary, Romania, Bulgaria, Greece through Crete to finish in Cyprus.







9.1b According to the difficulty degree

Easy An ideal walk for families, beginners, seniors	Medium A comfortable trail for walkers in good physical condition	Difficult A steep and rugged trail for very good walkers	Sporty A steep and sustained trail with potential risks, reserved for experienced walkers
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Another important factor in classifying the hikes is the technical difficulty of the route.

The difficulty can also be calibrated in four levels. This classification differs significantly according to the regions and their types of landforms, while being based on the same principles.

What determines the difficulty of a route is essentially the condition of the trail, its slope and its escarpment, the risks incurred in the event of a fall, the height difference, the altitude, the climate, the remoteness, the distances to be covered without an escape route, without access to supplies and without accommodation facilities.

Mountain hikes in particular require specific precautions above 3000 m given the risks of "acute mountain sickness" which can potentially develop into pulmonary edema beyond 3700 m or even cerebral edema beyond 5000 m.

The difficulty on the same route may also vary depending on the weather conditions.

These levels of difficulty are also indicated on the trail information materials and are given as an indication for adults. With children, you have to increase the difficulty level by at least two notches.

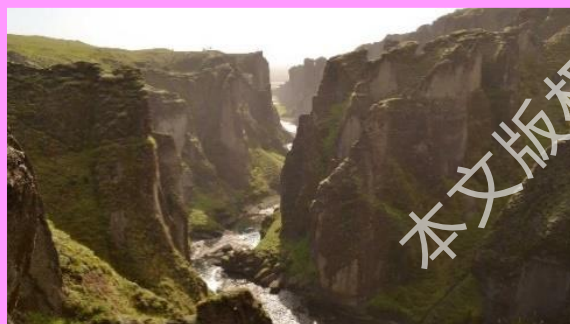
EXAMPLES OF TRAIL TYPES WITH DIFFERENT DIFFICULTIES



FJAORARGLJUFUR CANYON TRAIL (ICELAND)

The factors that make this route an easy hike despite very steep terrain and potentially dangerous for those who stray from the paths, are:

- The maintenance and marking of the trails;
- Relatively soft and comfortable walking surfaces;
- The low altitude;
- A short distance of 2 km and a short walking time.



THE "GR 21" ALONG NORMANDY COAST (FRANCE)

What makes this route easy to walk 190 kilometers along the coastline are:

- The maintenance and marking of the trail;
- The low altitude;
- Not very stiff and comfortable walking surfaces;
- Little or no altitude difference.



THE TOUR OF MOUNT GONGGA IN SICHUAN (CHINA)

The factors that make this route a sporty hike are:

- The altitude between 3000 and 5500 m;
- The distance of 200 km;
- The steep parts of the trail;
- Remoteness with few areas covered by telephone networks and with few escape routes;
- The total absence of marking;
- The need for walkers to bring their own food and sleeping arrangements;
- A very capricious local climate in the shear zone between the continental current descending from Tibet and the subtropical current ascending from the plain of Chengdu.

The hike is in the Tibetan Autonomous Prefecture of Ganzi and revolves around Gongga Shan (7556 m altitude).





THE DHAK BAHIRI CAVE TREKKING (INDIA)

The factors that make this route a sporty one-day hike is rainforest, rocky and slippery terrain during monsoon periods, and extremely steep paths where hiking comes close to climbing.

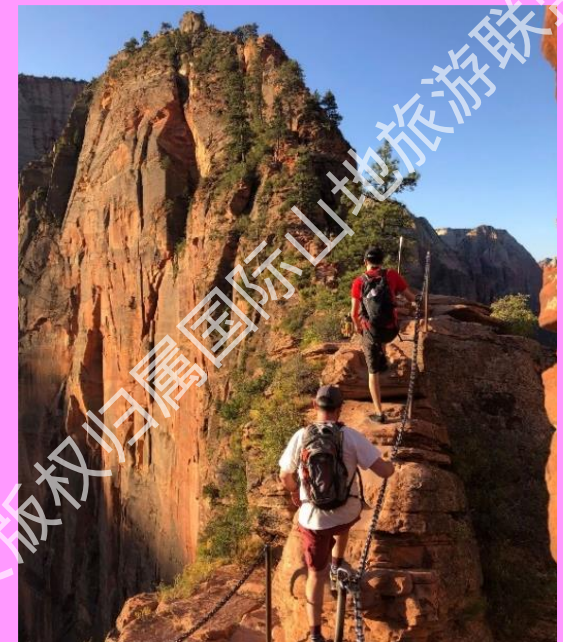
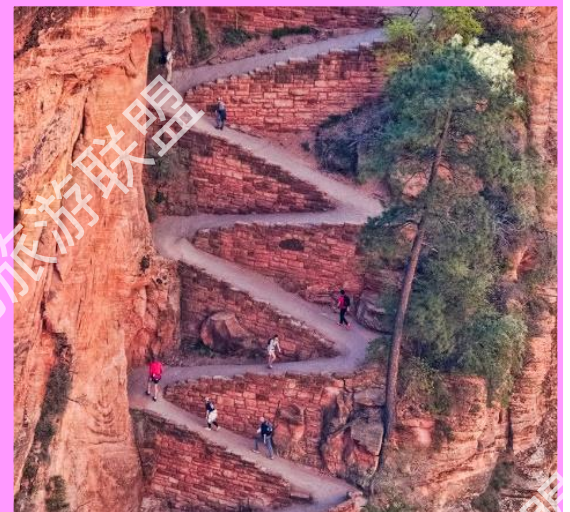
One of the main attractions on the route is a sacred cave in the heart of a chain of small mountains. The walking time is about six hours. It is mostly used by pilgrim walkers who use it to pay homage to the god Bahiri.



THE ANGEL PATHS OF AMERICAN NATIONAL PARKS (USA)

The factors that make the "Bright Angel path" route in the Grand Canyon National Park in Arizona a difficult hike is the 1350 m of ascending altitude difference of the red sandstone cliff, where visitors need to climb 16 km of steep trail exiting at an altitude of 2075 m. The trail is the scene of dozens of rescues each year, usually due to the unpreparedness of the hikers and their recklessness. The trail is very busy and is classified as a "National recreation trail".

The factors that make the "Angels Landing Path" in the Zion National Park in Utah a sporty hike are the narrow and vertiginous paths requiring skill, confidence and the utmost caution. The length of the hike is 9 km and takes hikers three to five hours of acrobatic walking and a positive height difference of 450 meters. The trail is vertically above the canyon. Even though nearly ten hikers have lost their lives here over the past 15 years, this remarkable trail is extremely popular and very busy.





©pixabay.com : elevated forest path with wooden walking area (New Zealand)



©Serge Koenig : retaining wall on a mule track in Kangding (China 2016)

9.1c

According to the level of equipment and maintenance

Artificial ex nihilo tourist trail

Maintained and marked natural tourist trail

Natural tourist trail with safety equipments

Nature trail in adventurous terrain



Hiking trails are often old tracks historically used by local populations (mule trails for peasants, trade, smuggling activity, etc.), and which are rehabilitated, marked, and maintained for recreational and touristic use.

Arranging a trail for recreational hiking makes it practicable and accessible to as many people as possible. A wide variety of developments exist between the two extremes, which are on the one hand "aseptic" trails which are built artificially and ex nihilo in open-air parks intended for mass tourism, and on the other hand, difficult trekking trails, preserved in their original conditions in mountains, deserts or primary forests, and intended for uncrowded, exceptional, and adventure tourism.

Trails, with the right level of equipments, have many advantages. They are an element of attractiveness for a community. They participate in a pleasant living environment for residents, contribute to conviviality and generate tourist profitability. They offer a possibility to reconcile access to nature while preserving it (refer to P1 - Chapter 12).

Here are some examples of the different types of facilities and equipments (refer to P2 - Chapter 6):

- Markings and signage to guide the walkers;
- Safety equipments: handrails, fixed cables, guardrails, etc.;
- Comfort facilities: stone or wooden footpaths, stone or wooden steps, etc.;
- Progress equipments: creation of artificial fords with rocks or culverts, crossing ravines with suspended pedestrian bridges, climbing walls with ladders, crossing obstacles with tunnels, etc.;
- Leisure facilities: relaxation areas, picnics, viewpoints, etc. ;
- Protection systems for sensitive environments: walking on wooden paths, elevated paths, etc.;
- Heritage appreciation: restoration of old buildings, repair of stone walls, etc.

Ph: Artificial path of the Xianju massif (Zhejiang-China); Maintained and marked natural trail of the Vosges mountains (France); secure trails in the Alpspitze massif (Austria); path of yak breeders in the GonggaShan massif (Sichuan-China)

EXAMPLES OF TYPES OF DEVELOPMENTS COMMONLY ENCOUNTERED



PENNINE TRAIL DEVELOPMENTS (ENGLAND)

The authenticity of its markings and traditional old wood facilities makes it a very special hiking trip.

*This path, some 400 km long that takes roughly three weeks to complete, is the most historic and emblematic hike of **Great Britain**. The route follows the ridge of the Pennines Mountain Range and passes through the National Parks in Peak District, Yorkshire and North Pennines. The access to the trails is open and free.*



DEVELOPMENTS OF THE KUNGSLEDEN TRAIL (ISLANDE)

The facilities are plain, designed with natural materials, very simple and well-integrated into the environment.

This very long hiking route (425 km) created at the end of the 19th century to allow people to admire the landscapes of Lapland, is dotted with refuges every 20 km for the accommodation of hikers and is equipped with narrow paths made of wood, designed in a very simple way, so that hikers can cross wet and marshy areas, which is particularly the case for the section of trail that runs through Abisko National Park. The access to the trails is open and free.



DEVELOPMENTS OF THE LANGTANG VALLEY TREK (NEPAL)

The rudimentary facilities are functional for local communities that use these trails to work and move. They have hardly been adapted for tourist use, which for many hikes makes them more attractive giving the hike a feeling of adventure.

*This hike in Langtang National Park away from conventional trekking allows hikers to penetrate the cultural and scenic environment of the Himalayas for a week by approaching the border of the autonomous region of Tibet, located in **China**. Hiking in **Nepal** requires a trekking permit (US\$10 to US\$20) and an entrance ticket to the park (refer to: P1 - Chapter 4).*



DEVELOPMENTS FOR HIKING TOWARDS THE MER DE GLACE (FRANCE)

These are progress facilities with ramps and ladders allowing you to walk to the shore of the Mer de Glace glacier in 45 minutes.

In the past 30 years, due to global warming, the glacier has retreated by 2.5 kilometers and its thickness has decreased by 100 meters, which forces the municipal authorities to develop this path on an additional scale each year...

This trail begins at the Montenvers railway station linked to the Chamonix valley by a small cogwheel train route created in 1909. Hikers can also climb there via a network of forest trails with a distance of 5 km and 900 m of ascending altitude difference.

The Montenvers station overlooks the Mer de Glace, one of the largest alpine glaciers. This site, known by travelers and hikers since 1741, is today one of the most visited sites in France with nearly one million tourists per year. While the "round trip" train ticket is 34€ for adults, all hiking trails are free to access.



GREENWAY DEVELOPMENT OF AN OLD RAILWAY (FRANCE)

The 22 km of railway line abandoned since 1968 in the Ardèche department has been converted into a greenway (the Via Ardèche). It has hence been dedicated to soft mobility: hiking, cycling, and rollerblading. The route crosses numerous viaducts, and the total length is expected to be extended by 70 km by 2022. The access is open and free.



PROGRESS DEVELOPMENT AND TOURIST ATTRACTION (SWITZERLAND)

The path between Grächen and Zermatt in the Swiss Valais was already considered as one of the most beautiful alpine hikes. Since the construction of the longest pedestrian bridge in the world (495 m) in 2017 for an investment of US\$820,000, the tourist reputation of this route has grown. The trail attracts more walkers and even foreign tourists who are usually non-hikers. The access to the trails and the pedestrian bridge is open and free.





NON-DEVELOPED HORSE TRACKS FOR A CLASSIC TOURISM (CHINA)

Keeping them in their original condition, without security or modern facilities, is part of the appeal for enthusiasts looking for adventure. Some of these trails have become superb legendary long-distance treks popular with hikers in search of distant discoveries.

This thousand-year-old network of functional trails once served as routes for barter caravans exchanging tea from Sichuan and Yunnan for horses and salt from Tibet. These roads were much more than a simple commercial route; they were the scene of encounters between ethnic groups and of linguistic and cultural exchanges. This route is a testament to China's cultural past... The access to these trails is free for independent trekkers.



EXAMPLES OF TYPES OF SPECIAL DEVELOPMENTS (PAID TRAILS)

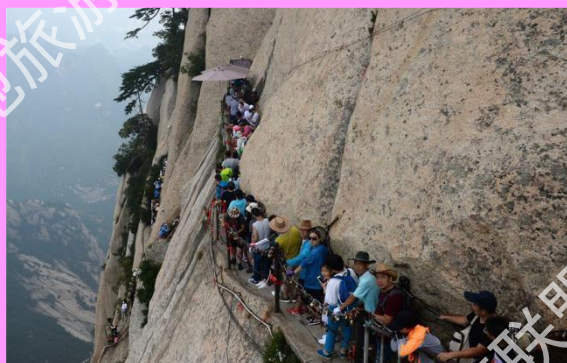
These tours are usually found on sites organized for mass tourism, with entry tickets and opening and closing hours, just like museums and leisure parks.



HUASHAN, CHINA. *These Taoist equipments in Shaanxi are a formidable ancestor of the concept of via ferrata lukes whose tourist developments have multiplied since the 1980s in Europe and the 2010s in China.*

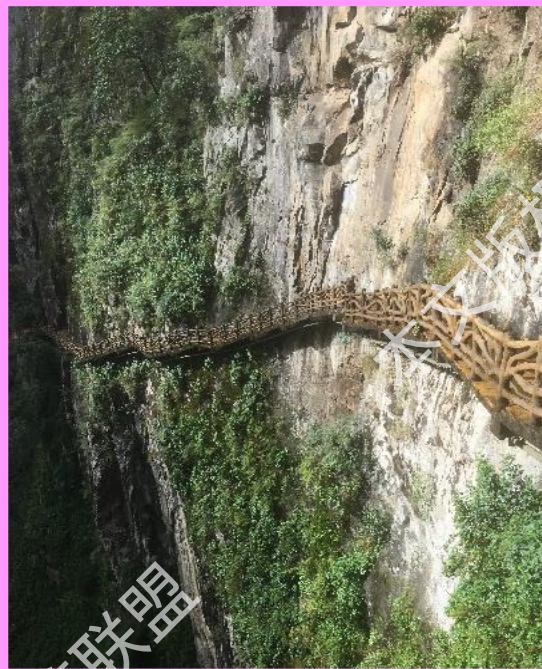
These ancient paths of the Huashan massif, carved into the granite walls and secured by chains, had been used for centuries by Taoist and Buddhist hermits and by intrepid pilgrims. With the development of mass tourism and the construction of the first cable car in Huashan, these granite-carved trails have earned a reputation as one of the most "dangerous hikes in the world." New safe trails have been built and sections deemed risky have been closed. Some sections have been fitted with cables to secure tourists with climbing harnesses.

The success of these Huashan hikes is based on a cocktail of history, the centuries-old and authentic equipments, the religious tradition, the emotion produced by the trail, and the beauty of the mountains. Entry is for a fee: in peak season, each adult is US\$15 for several kilometers of trails in the heart of the massif.





YANGBI, CHINA. This park in Dali prefecture in Yunnan offers visitors an ex-nihilo path built into the cliff, 400 m in length as part of a one or two hour walk on the bank of the torrent at the bottom of the valley. The entrance ticket to the park is US\$20. This is more of a walking tourism product than a hiking product.



THE THROAT OF THE DEVIL, FRANCE. This ex nihilo path in Haute Savoie is a walk for classic mass tourism and not a hiking offer. The entrance ticket for an adult's 1.5km route of pedestrian bridges is US\$15..



THE CAMINO DEL REY, SPAIN. This artificial path in Los Ardals Park in the south of the country is 8 km long, one third of which is on pedestrian overhanging path anchored along the cliff. It takes approximately three to four hours to complete.

This is a park walking attraction and the entrance ticket costs US\$10. The daily attendance is limited to 1,100 people. The nearby fast trains add a surreal side to the ambiance of this walk.





9.1d

According to the level of recreational and tourist interest of the trail

Local level trail

Regional level trail

National / international level trail



These three categories are determined by characteristics specific to each trail. These are:

- The level of appeal of the natural environment (landscape, fauna, flora, climate, etc.);
- The level of appeal of the points of cultural interest (ethnic communities, traditions, history, monuments, places of pilgrimage, etc.);
- The authenticity and level of preservation of the natural and human environment;
- The intensity and quality of the hiking experience;
- The level of quality of the associated services and facilities;
- The authentic and welcoming character of the whole region, in particular, the start and finish areas of the trails;
- The success and reputation of the trails;
- The quality of the maintenance and marking of the trails;
- The efficiency of marketing and communication campaigns;
- Etc

TABLE: Characteristics and attributes of the categories of trails

Regional, national and international trails	
Main characteristics	Main attributes promoting success
<ul style="list-style-type: none"> Trails and facilities whose natural and cultural environment and management and promotion standards allow for regional to world-class hiking experiences; Fully-fledged destination attracting visitors from the region, the country and abroad: for hiking tourism where the trails are the purpose of the trip; Trails frequented and appreciated for leisure and recreation by walkers from local communities in a region; High-level events and competitions on the themes of hiking and trails. 	<ul style="list-style-type: none"> Exemplary offer of trails and hiking which enhances the region or even the country in the tourist competition of identical destinations; Landscapes and cultural identity which are potentially unique to the region; Receiving government support at the regional and national levels for the development and management of the trails identified as priorities in development plans and strategies; Supporting the sectors of accommodation, associated products and services via high-yield trails, with direct and indirect benefits participating in the tourist economy and societal benefits for the local communities; Providing direct and/or indirect economic benefits to the state.
Local trails: sites, cities, inter-cities, counties	
Main characteristics	Main attributes promoting success
<ul style="list-style-type: none"> Trails and facilities regularly used by local residents for recreation, physical activities, healing and well-being. Potential attraction to be developed for regional or even national visitors according to innovative concepts, ++ hiking activities (refer to P1 - Chapter 8) and the levels of associated services. 	<ul style="list-style-type: none"> Located on the outskirts/near residential areas and connected to community services and open spaces; Representing the identity of the site; Providing access to a variety of trails of various difficulties, lengths and types; Sharing the trails with different segments of practitioners for non-motorized active recreation such as horseback riding and cycling; Providing equitable access for all; Being recognized by local residents as a popular, frequented and valued trail system.

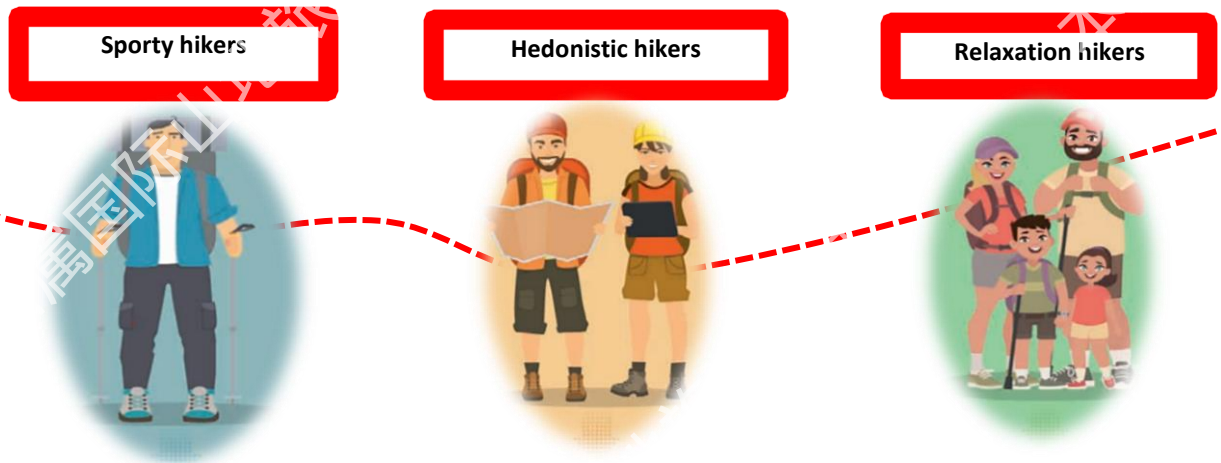




9.2- Categories of hikers

9.2a

According to the intensity of the practice

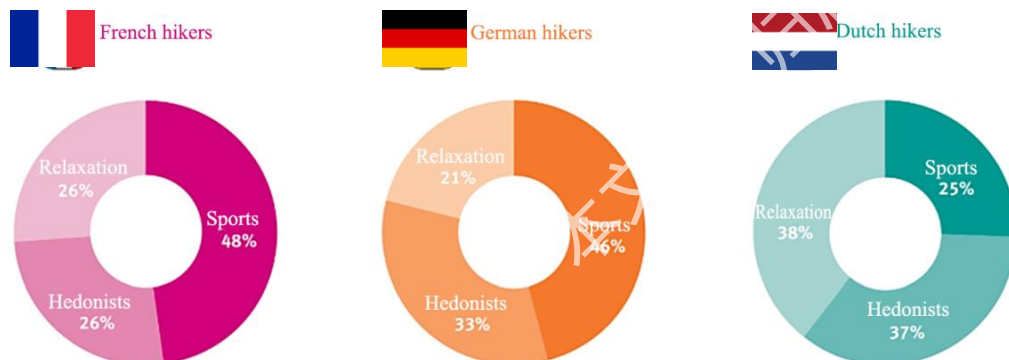


Hikers can be classified into three groups according to the intensity of practice: sporty hikers, hedonistic hikers and relaxed hikers

(Source: Atout France).

TABLE: Segmentation of these three categories: sporty hikers, hedonistic hikers and relaxed hikers in the hiking market in France, Germany and the Netherlands.

DISTRIBUTION OF HIKERS BY SEGMENTATION



Source: Questback - Atout France online survey (2017)

TABLE: The segments of tourist-hikers in these three countries according to profiles and expectations







Customer s of the market	Profiles of the hiker	Selection criteria and locations	Type / average length of stay	Types of accommodation	Types of hikes practiced	Desired trail experience
 France	60% male 41% PCS + 54% 18 - 44 years 48% Sport hiker 26% hedonistic hikers	- A balance between landscapes and climate * Mountain: 79% * Sea: 31% * Countryside: 29% * City: 7%	- As a couple: 44% - With family: 23% - With friends: 23% * 1-7 days: 77% * More than 8 days: 23%	- Hotels: 20% - Furnished rental: 20% - Guest rooms: 16% - Camping: 16%	- 4 h or 13.3 km - Average to difficult altitude difference (From 600 m to more than 1,000 m) -19% touring hike	- Relaxation activities: 62% - Cultural activities: 52% - Sports activities: 39% - Mainly picnic
 Germany	54% male 30% PCS + 56% 18 - 44 years 46% Sport hiker 33% hedonistic hikers	- A balance between landscapes and climate. - Quality/price ratio * Mountain: 60% * Sea: 37% * Countryside: 34% * City: 18%	- As a couple: 52% - With family: 30% - With friends: 17% * 1-7 days: 68% * More than 8 days: 32%	- Hotels: 46% - Furnished rental: 22% - Guest rooms: 13%	- 4h or 12.7 km - Easy altitude difference (- of 600 m) -15% touring hike	- Relaxation activities: 75% - Cultural activities: 64% - Sports activities: 42% - Picnic and restaurants
 Netherlands	55% male 44% PCS + 37% 18 - 44 years 38% relaxed hikers 37% hedonistic hikers	- A balance between landscapes and climate. - Quality/price ratio * Mountain: 53% * Sea: 30% * Countryside: 23% * City: 22%	- As a couple: 51% - With family: 29% - With friends: 17% * 1-7 days: 54% * More than 8 days: 46%	- Hotels: 40% - Furnished rental: 21% - Camping: 11%	- 3h15 or 11.3 km - Easy altitude difference (- of 600 m) -11% touring hike	- Relaxation activities: 76% - Cultural activities: 65% - Sports activities: 32% - Mainly restaurants

TABLE: Analysis of preferred activities according to the three categories of hikers

Clientele by segmentation	Activity intensity	Choice criteria and locations	Type and average length of stay	Desired trail experience	Sources of information
 Sporty hikers	- More than 4 hours per day - Every day during the stay - Motivated by the search for adventure and immersion in nature and the discovery of landscapes	- Beautiful landscapes and diversity of the trail offer	- In couple and with friends - Mainly less than a week - The mountain as a space of predilection - Resides in a hotel, in a refuge or in a wild camping	- 5h walk or 15 to 16 km - Medium to difficult climb (from 600 to over 1000m) - Picnic for the vast majority - The proportion of touring hikers is higher than the average of hikers	- Specialized websites - Topoguide
 Hedonist hikers	- Less than 4 hours per day - Every day during the stay - Motivated by the discovery of landscapes, the pleasure of being together and the calm	- Beautiful landscapes and the diversity of the trail offer and the quality of the accommodation	- In couple and with family - Mainly less than a week - Various practice areas (coastline, countryside, city, mountain) - Resides in a hotel, rental campground or second home	- 2h30 walk or 10km - Easy or no altitude difference (less than 600m) - Picnic or restaurants - The proportion of touring hikers is lower than the average of hikers	- Advice from relatives - Topoguide - Tourist office
 Relaxed hikers	- Less than 4 hours per day - Do not hike every day - Motivated by the discovery of landscapes and territories, the well-being provided	- Beautiful landscapes and diversity of trails, activities and visits	- With family and in couple - Mainly one week or more - The coastline and the countryside as a preferred space - Resides in a rental or hotel	- 2h walk or 9.3km - Easy or no altitude difference (less than 600m) - Picnic or restaurants - The proportion of itinerant hikers is lower than the average of hikers	- Advice from relatives - Tourist office

(Extract: "customers of hiking tourism" - Atout France 2019)



TABLE: Analysis of trail preferences according to the profiles of Australian hikers

Extract from the 2015 marketing plan for the SW region of Barwon in Australia

Audience	Trail experience preferences	Trail type preferences
SINKS/DINKS Single Income No Kids Double Income No Kids	<ul style="list-style-type: none"> - Short hiking trips accessible by car from a radius of 1h30; - Searching for different, immersive, authentic experiences. 	<ul style="list-style-type: none"> - Short trails and easy one-day hiking adventures on slightly long trails; - Trails with characterful accommodation.
Young people Families	<ul style="list-style-type: none"> - Family hikes during short enjoyable stays; - Longer family vacations with hiking as an activity for children. 	<ul style="list-style-type: none"> - Short one-day trails, close to accommodation services; - Short and easy trails, suitable for children, near entertainment and activity centers.
Seniors Families	<ul style="list-style-type: none"> - Short hiking trips accessible by car from a radius of 1h30; - Family vacations with hiking opportunities for everyone. 	<ul style="list-style-type: none"> - Short-term and one-day accessible trails; - Trails with overnight accommodation services on site and near other attractions.
Families in their 40s	<ul style="list-style-type: none"> - One-day trips, short breaks and longer vacations; - New experiences outside their comfort zones; - Searching for relaxation and pleasure. 	<ul style="list-style-type: none"> - Varied range of preferences, for short outings, for one-day trips, or with overnight stay during longer hikes; - More sustained adventure hiking for several days.
Retirees	<ul style="list-style-type: none"> - Authentic unusual experiences; - Users who may be limited by physical disabilities. 	<ul style="list-style-type: none"> - Short and one-day trails in a varied range of standards, with potential accommodation (according to the physical capacity and interest).
Experience lovers	<ul style="list-style-type: none"> - Authentic and adventurous experiences that allow hikers to immerse themselves and learn about places, cultures, nature, etc.; - Varied range for expenses while hiking. 	<ul style="list-style-type: none"> - Adventurous, immersive and emblematic one-day trails and trails for several days; - Trails of particular interest for those who travel especially for these hikes; - Trails with characterful accommodation and the possibility of guided hiking services with a varied price range.
Experienced hikers	<ul style="list-style-type: none"> - Immersive experiences, preferably isolated, distant and/or difficult. 	<ul style="list-style-type: none"> - Interesting and challenging trails, whether short or long-distance for several days; - Trails for independent hikers.
Local residents	<ul style="list-style-type: none"> - Short sessions of outdoor recreation and hiking during the week; - Weekends and longer vacations in the search of hiking experiences. 	<ul style="list-style-type: none"> - Short and one-day trails, accessible from home or by car; - Trails with access to points of interest in the region.
Schools	<ul style="list-style-type: none"> - One-day short adventures as part of outdoor and environmental education programs. 	<ul style="list-style-type: none"> - Short and one-day trails of easy to medium difficulty, easily accessible from the school or the base camp of the school trip; - Trails in places that contribute to the educational experience (for example, with the interpretive panel on the environment and cultural history or areas with rich flora and fauna).
Groups	<ul style="list-style-type: none"> - Excursion by passenger bus for business groups, seminar and conference groups, team-building groups, tourist groups who are looking for a hiking experience. 	<ul style="list-style-type: none"> - Short half-day trails with points of interest; - Trails suitable for all members and that allows for interaction within the group; - The trails must be accessible with the facilitator, close to car parks and close to accommodation, congress, and conference rooms.
Participants in events	<ul style="list-style-type: none"> - Activities over various distances, short and long term according to the needs of the event; - Events can be, for example, charity walks, trail-running races, orienteering competitions, etc. 	<ul style="list-style-type: none"> - Range of trails suitable for the activity of the event with entry/exit points accessible to organizers, media and spectators; - Close to accommodation areas and transport points.

SPORTS HIKERS WHO BECOME RUNNERS AND TRAILERS: A TRUE SOCIETAL PHENOMENON

The trail consists of running and walking as quickly as possible in the middle of nature on paths, on plains, in forests or in mountains. It has become a fully organized practice at the international level with major competitions.

The International Trail Running Association, ITRA, (recognized by the International Association of Athletics Federations) is responsible for promoting and developing trail running around the world. Data from 2013 to 2019 show that 1.77 million competitive runners for 25,700 trail races organized in 195 countries or autonomous regions.



The trail is posted on social networks with #fitgirl and #healthylife on Instagram. Over 7 million posts have been made with the hashtag #trailrunning, to which #instatrail, #ultratrail, #trailaddict, etc. are added. Top trail runners have a massive following on social media, such as Frenchman François D'Heane (673,000 subscribers on Instagram) and Spanish Kilian Jornet (532,000 subscribers). YouTube offers a program entirely dedicated to trail-running: E-Motion Trail. Dedicated applications are available on iOS and Android: TrailPassion Mobile, TrailConnect, SityTrail.

In 2018, the number of occasional or regular "runners", non-competitors, or competitors, is estimated between 9 and 13 million in **France** (1/6th of the population). Among them, about 2 million are ready to participate in an organized race. Running is the third most practiced discipline in the country behind swimming and fitness. The three main motivations of trail runners are to improve their physical condition (58%), to maintain good health (58%), and to lose weight (35%).

Running outside stadiums is also exploding in **China**. 34,000,000 regular runners in 2016, 52,770,000 in 2017, and 73,000,000 in 2018, among whom 30% were women.

In 2010, there were 22 marathon organizations, a number that increased to 51 in 2015, and 328 in 2016. As for the number of trail races, three organizations were active in 2010, 101 in 2014, 368 in 2016, and nearly a thousand in 2017. In 2019, the number of trail runners is estimated to be 400,000. The Chinese Athletic Association has 579,000 runners for the 263 races, marathons, and trails, registered in the official circuit in 2019. These statistics do not represent (and are even far from) the totality of organized races, nor the total number of trail enthusiasts, competitors, and non-competitors.



(Source: General Sports Administration, Xingzhi)

The first great trail running experience dates back to 1974: the Western 100 miles in California, **USA**. In **European**, the Mont-Blanc Ultra-Trail (UTMB) created in 2003 in Chamonix, **France** must be mentioned. This race, which has become the world reference, with its length of 200 km and 10,300 m of ascending altitude difference. Involved in the UTMB are 2,000 volunteers, 10,000 competitors on six different routes, 7,000 accompanying persons, 50,000 visiting spectators, 73,000 overnight stays, an average budget per runner of 1,000€, 250 journalists, 135,000 viewers in three countries crossed (**France, Italy and Switzerland**). The UTMB brings in 13.6 million euros (excluding transport costs) to the territories it runs through: trail running has become an important economic issue and is a pioneer in the establishment of an eco-responsibility charter for the organizers of such competitions (refer to P1 - Chapter 12).

The organizer behind the French UTMB is partnering with Exploring Xingzhi Group to develop "by

Running in nature: cope with the COVID positively

An international survey in 2020 carried out by the Japanese sport gear company ASICS (for running shoes), with a sample of 14,000 people in 12 countries, highlights an increase in the craze for the practice of running during confinements related to Covid.

"The need to feel freer and less stressed" is the most cited motivation (Refer to Chapter 7 - P1)





9.2b According to the motivations



The motivations and goals sought by hikers through their walking activity are decisive in the conceptualization of the trail experience offer.

TABLE: Segmentation of sporty hikers, hedonistic hikers, and relaxed hikers according to four types of motivation

HIKERS' MOTIVATIONS BY SEGMENTATION

Contact with Nature - Relaxation	Discovery
<p>Relaxation Hikers</p> <p>Hedonist and Relaxation Hikers Enjoy the peace, nature and tranquility</p> <p>Sporty Hikers</p> <p>Feeling of freedom</p> <p>Hedonist Hikers Beauty of the natural landscapes, exceptional and sensational</p> <p>Sporty Hikers</p> <p>Facing nature, the elements</p> <p>Sporty Hikers</p> <p>Feeling of isolation</p> <p>Sporty Hikers</p> <p>Escape, change of scenery</p> <p>Sporty Hikers</p> <p>Simplicity, authenticity of the wilderness</p>	<p>Relaxation Hikers</p> <p>Meeting and discovering native people, opening up to foreign cultures</p> <p>Hedonist and Relaxation Hikers</p> <p>Discovery of a gastronomy</p> <p>Relaxation Hikers</p> <p>Discovery of historical and cultural sites</p> <p>Relaxation Hikers</p> <p>Exploration of unknown places and discovery</p>
Reunion - Sharing	Wellness - Health
<p>Hedonist and Relaxation Hikers</p> <p>Pleasure of being / doing together, building memories / cohesion</p>	<p>Hedonist and Relaxation Hikers</p> <p>Soft and flexible active vacations</p> <p>Sporty Hikers</p> <p>Rejuvenate mentally</p> <p>Hedonist Hikers</p> <p>Stay in good physical condition, in shape</p> <p>Sporty Hikers</p> <p>Surpassing oneself (< 35 years old)</p>

(Extract from "customers of hiking tourism" - Atout France 2019)



9.2c According to other criteria

Age

Gender

The socio-
professional
category

Practice alone or
with others



Many other criteria define particular segments of practitioners and can guide hiking development policies, projects, and marketing strategies. Among these are the sociodemographic ones: age, gender, nationality, marital status; education level; professions and social categories, etc.

Here is an example of the distribution of hikers in **France** according to these sociodemographic criteria:

- Age: 43% of the estimated 18 million practitioners (out of a population of 67 million) are over 50 and 27% are retirees;
- Gender: 52% of the 16 million French practitioners are women and 48% are men;
- Socio-professional category: 48% of the 16 million French practitioners come from popular categories and 33% are university graduates;
- According to the modalities of practice: 42% of the 16 million French practitioners walk with family, 35% as a couple, 31% regularly walk alone, 39% regularly with friends.

The multi-practice trends

Of the 16 million French practitioners, 2.7% say they regularly practice other sports activities in nature, including cycling on roads and cycle paths (25%) and mountain biking on tracks and paths (21%).



The practice of seniors

Walking tops the list of recommended sports activities for older people.

The French Hiking Federation, for example, has 20,000 members, 70% of whom are over 50 years old;

- 60-69-year-olds is the most represented age group;
- Followed by 50-59-year-olds and 70-79-year-olds.

Tour operators also take advantage of this so-called "third age" segment by organizing tailor-made tours or "vitality hikes".

Seniors represent,

- 35% of the customers of the Adventure Club;
- 40% of the customers of the Company of Maritime Trails in Brittany;
- 15% of the customers of the Company La Balaguère.

In Chamonix, the Tour Guide Company launched the "Mont Blanc Tour" (170 km) for older walkers, reducing the duration of the stages to two and a half or three hours maximum with more comfortable accommodation, catering, and support services. And it works well!



Practices for practitioners with disabilities

The offer of trails should also take into account such users, who should also be able to access the experience of hiking in nature. As disabilities may be physical or mental, special training for sports educators with the option of "Adapted physical and sports activities" helps to better supervise and guide them. For example, in the case of a paraplegic person, a crew of three hikers is necessary, so is a "joëlette", a sedan chair with one wheel. Some clubs specialize in supporting this particular audience, organizing outings and offering "joëlettes".

Organizing the accessibility of the trails to this particular audience is above all a social and integrative activity.







9.2d

According to the modalities of practice

Hiking alone



Hiking in association or with a guide



Through a tour operator



- Some organize their hiking trips by themselves;
- Some practice in the associative framework (hiking clubs) to integrate a group, and be accompanied by experienced hikers;
- Some hire a hiking guide;
- Some are clients of tour operators, purchasing a travel service;
- And some choose to hike at organized events.

Take **France** as an example to illustrate the ratio between these different modalities of practice:

- 60% of them never call on supervision: they organize and practice independently;
- 12% of them practice regularly in groups organized by associations or between friends, sometimes with a private guide;
- 3% of them prefer commercial structures such as specialized tour operators;
- 23% of them participate in competitions (trail running in particular) or other events.

(Source: National Resource Center for Outdoor Sports of the French Ministry of Sports)



KEY POINTS TO REMEMBER





HIKING TRAINING AND PROFESSIONAL PRACTICE

10

If the term "mountain guides" is used all over the world for mountaineers, the terminology and qualifications are more diverse for hiking professionals. Thus, the people responsible to guide hiking activities are defined as either "mountain accompanier" or "hiking accompanier" (France and Switzerland), and "hiking instructor and hiking coach" (Belgium) and "hiking guide" (Spain, Portugal, Germany). In Slavic countries, the noun "accompanier" and "guide" mean the same thing. In England, the term "leader" is used (International Mountain Leader, Climb Leader, Winter Mountain Leader, and so forth). In Italy, diplomas are issued for certified "guides for nature walks" and an "environmentalist guide". Switzerland also issues a diploma of "heritage interpreter guide" which allows one to lead a hike and undertake other related tasks. The wide variety of terminology illustrates the wide range of professions involved in the guiding of hiking activities.

To put it simply, all these professionals are "hiking guides" with more or less different qualifications and responsibilities. All of them, at their respective levels, open the way and set the pace for the group under their responsibility, making sure that everything goes well, while also advising and teaching their groups. It is a profession that is as much technical as it is educative and relationship oriented. Ultimately, the satisfaction of their clients depends directly on the quality of their service.

This chapter deals with the cases of France and Great Britain, two countries which, because of their geography and their strong hiking culture, offer a wide range of training for professionals as well as for volunteer guides.

CHAPTER SUMMARY

- 10.1 Training means profession and jobs
- 10.2 The hiking training system in France
- 10.3 The hiking training courses in France
- 10.4 The hiking training system in England
- 10.5 Professional responsibilities
- 10.6 Additional training



©Tourism on Reunion Island: hiking guide with a group of children on Reunion Island (France)



©Yang Xuan Hua, supervised trekking at a high altitude of 5000m around Gongga, Sichuan Province (China 2016)

10.1 - Training means profession and jobs

The range of training courses that allow for the guiding of hiking is extremely wide. It reflects the great variety of practices, both in terms of geography and of associated themes (refer to P1 - Chapter 8).

Thus, the required skills and the corresponding training, as well as the resulting employment, are not exactly the same according the latitudes where the guide leads his clients, on the coastline, or in the mountains, in the deserts or in boreal regions, in the forest or grassland.

DIVERSITY OF PROFESSIONS

Originally mountain centered, the profession of "hiking guide" has adapted and developed to all types of territories, practices, and clientele.

The profession can be divided;

- According to the practice objective (refer to P1 - Chapters 8 and 9):
 - Recreational practices that allow the discovery of the territory and the environment: natural, cultural, and human heritage;
 - Educational practices, that enable people to learn about the territory and to better understand its environment;
 - Sporting practices that are challenging, require a good physical condition and the ability to manage the hazards of the terrain;
 - Competitive or fitness practices (not covered in this document).
- Depending on the length of the guided tour:
 - For a walk that is less than four hours of effective walking (refer to P1 - Chapter 9) such that:
 - Bird watching hike in the Lands or peatland discovery in the Vosges in **France**;
 - Fossil discovering on the Yorkshire coast or following in the footsteps of dinosaurs in Cornwall in the **United Kingdom**.
 - For a hike with an effective walking time of more than four hours as in the case of:
 - A seven to eight-hour hike on the alpine trails in Kandersteg or at the Grosse Scheidegg in the German-speaking part of **Switzerland**;

- Scheidegg in the Oberland of German **Switzerland**;
 - Day-long hikes along a section of the legendary Ox Road in **Denmark**, 500 km at sea level and traveled over the past 4,000 years by pilgrims, armies and merchants;
 - Trekking tours of several days or weeks at high altitudes in the world's major mountain ranges (e.g., **Nepal, Peru, Ecuador**, etc.).
- Depending on the particular natural environments such as mountains, primary forests, and deserts:
- Hikes on active volcanoes (such as Etna and Stromboli in **Italy**, or Piton de la Fournaise on **Reunion Island**, or volcanoes in **Indonesia**);
 - Hikes in desert areas (such as the Atlas Mountains in **Morocco**, the Hoggar in **Algeria**, the Gobi in **China**);
 - Hikes in tropical forests (as in the jungles of **Guyana** or **Brazil**);
 - Or hikes on the other extreme in the northern and southern polar lands (such as **Spitzbergen, Greenland, Alaska** or **Patagonia**).

In effect, the training courses have been adapted to the expected skills and are sanctioned by diplomas that open up to professional privileges/obligations. These privileges are the framework for the exercise of the profession, which can be defined either by the regulations (if these exist in the country) or by the skills acquired through training.

For the client who chooses a guide or an intermediary service company (tour operator, travel center, etc.), these diplomas are a guarantee of ability to prove that the latter can safely supervise, lead, teach and train.

Hiking guide training “in mountains” is the most complete and gives access to the widest range of possibilities. Indeed, mountainous areas are the most complicated to manage and also the most dangerous. These areas are both the riskiest and the most popular for recreational, sports, and tourist activities such as hiking.



What defines a mountain area in European countries?

In Europe, mountain areas have been defined based on different combinations of altitude and apex. The criteria are differentiated according to five classes of altitude, based on the principle that the higher the altitude, the less rugged the landscape will need to be to qualify as "mountainous":

- For areas below 300 m, the objective is to identify areas with considerable relief contrasts over short distances, such as the fjords of Scotland and Norway and the coastal mountains in the Mediterranean, such as the Calanques of Marseille in **France**;
- Areas with an altitude of between 300 m and 1,000 m that meet the above criteria, or whose recorded elevations within 7 km varies by 300 m or more, are considered mountainous;
- All areas with an altitude of between 1,000 m and 1,500 m that meet any of the above criteria are considered mountainous;
- Areas with an altitude of between 1,500 m and 2,500 m, in addition to all of the above criteria areas, where the maximum steepness between each measurement point and the eight cardinal points around it is 2 degrees or more, are considered mountainous;
- All areas above 2,500 m are classified as mountainous.

For the whole of the European Union, 40% of the territory has been classified as a mountainous area. While two Member States (Denmark, the Netherlands) have 0% mountain areas, other countries have considerable proportions of these areas. 90% of Switzerland is considered mountainous, while the numbers for Norway, Greece, and Austria are all between 70% and 80%. Between 50% and 60% of the surface of Italy, Spain, Sweden, and Finland are mountainous, while France and Great Britain are between 20 and 30%. In France, these mountain areas are defined by local legislation, based on altitude, slope, and climate criteria.

The proportion of the European area defined as mountainous is much higher than the proportion of the population living in these areas, showing the low demographic of the mountain areas: an additional factor that attracts hiking enthusiasts looking for peace and tranquility far from the crowds.

THE OVERALL VARIETY OF "MOUNTAIN GUIDE" TRAINING

Training content will vary depending on several factors:

- The physical environment in which the activity takes place: in particular, the training courses can be distinguished from those that allow for guiding in the mountains, including winter, and those that only allow for guiding outside mountainous environment (plains, coastline, Etc);
- The cultural and social environment of the areas visited;
- The profile and skills of the people under responsibility of the guide;
- The choice of themes for the hikes;
- The status of the guide: with a volunteer or a professional diploma;
- Etc.

Additional training units have been integrated into certain curricula, focusing on:

- Environmental protection and sustainable development issues;
- The promotion of health-oriented sports;
- Supervision of specific groups such as the disabled;
- Management of rescue in remoted areas (such as in **Canada**, which devotes a full 15 days of training to this topic, or in **Macedonia**, which includes extensive training on how to transport an injured person by land caravan - considering the vast remoted areas in these countries).

The duration of training will inevitably vary from country to country depending on the content of the training and the number of skills to be acquired. For the same level of final competences, the duration of the training may also vary according to the prerequisites required of the candidates: an experienced hiker will need less training time to acquire the professional competence than a novice hiker.

In many countries that organize and regulate hiking practice, another standard considered in training design is professional qualification (paid professional guide) and voluntary qualification (in a associative structure). However, not all countries follow this principle, for instance, Great Britain does not differentiate the programs of professional and volunteer guides.

The management of risk: a key skill for hiking guides

It should be noted that the definition of personal risk is not exclusive to the mountain region. The risk depends on the profile of the terrain, independently of the altitude (even if the latter is an additional risk factor). A coastal path along a sea cliff requires as much attention as a path on the mountainside.

Therefore, physical, and technical difficulties may also exist in non-mountainous environment.

It should also be pointed out that the high number of hiking accidents, but they are often non-traumatic (refer to P1 - Chapter 11).

The difficulty of the hikes is classified according to the level of physical difficulty, risk and technical skills involved (refer to P1 - Chapter 4). In France, the Fédération Française de Randonnée Pédestre (French Hiking Federation) uses the grid as a reference since this association is appointed by the Ministry of Sports to promote the rules of hiking (www2.ffrandonnee.fr/data/CMS/files/cotation/FFRANCO-Guide-cotation.pdf). In Switzerland, the difficulty classification is carried out by the Swiss Alpine Club: it is the reference and basis for the regulation of the professional privileges/obligations of guides or mountain leaders (www.cas-geneve.ch/mMonCot.php).

All graduates, regardless of their level of training, have an "obligation of safety" for the clients they guide.

EMPLOYMENT

As the sector is experiencing rapid growth, both for local and tourist "customers", the future market for direct and indirect jobs in the hiking sector is looking good (refer to P1 - Chapter 3).

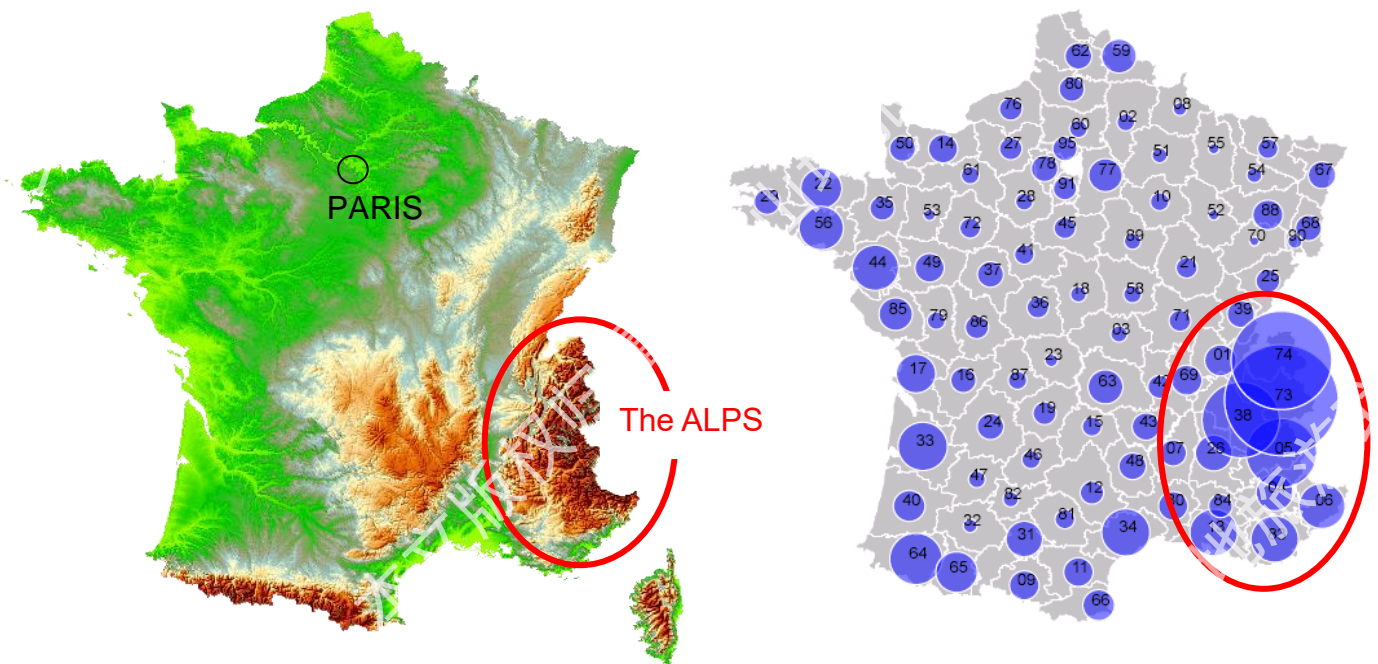
In terms of direct employment, **France** currently has some 10,000 qualified mountain leaders (AMMs), and around another 3,500 in training (i.e., working towards their qualification).

Indirect employment (restaurant owners, hoteliers, grocers, bakers, specialist retailers, mountain shelter wardens, hosting farms, tour operators, etc.) is very difficult to count due to the scattered aspect of the activity. But many examples of profitability in hiking can be found in this document ([refer to P1 - Chapter 3](#)).

Finally, the innumerable outings organized throughout the year by clubs and associations in hike-friendly countries are supported by numerous volunteer leaders, but also by professional hiking guides. These hiking activity also gives a job to all the staff who manage the association.

The mountains are the most promising terrain for hiking and trekking. It is here that the marked is the most flourishing.

The **map** presented below was published as part of an inter-ministerial survey conducted by the **French** Ministry of Sport, Tourism and Agriculture (2006) on outdoor sporting activities (for all disciplines, including hiking) and clearly shows that the largest number of practitioners (locals and tourists), clubs, commercial operators and professional guides and sports instructors are concentrated in the Alps.





©MTUK: mountain leader training, navigation course (England)



©ENSA: a graduation ceremony for young guides who have completed the National Ski and Mountaineering School training in Chamonix (France 2017)

10.2 - The hiking training system in France



France has established a complete and complex training system, with many diplomas and very perfect training related to hiking various activities. Financial aid for this vocational training motivates young people to choose to become hiking guide.

The following is a simplified and non-exhaustive description of the main training courses at different levels of hiking guides and organizers. These courses are a solid basis for making recommendations for a country wishing to design its own sets of qualifications in this field.

THE PROFESSIONAL DIPLOMAS OF "NON-MOUNTAINOUS HIKING"

Two main types of diplomas and professional qualifications allow, against remuneration, to guide hiking on non- mountainous terrain:

- "Generalist" professional qualification (that is to say, allowing the supervision of several different sport disciplines):
 - Certificate of State recognized Sports Educator - Physical Activity for All (known as the BEESAPT qualification)
 - Professional Certificate in Popular Education and Sport - Physical Activity for All (known as the BPJEPS APT qualification)
 - A license in the Sciences and Techniques of Physical and Sports Activities (STAPS);
- "Specialized" professional qualifications (allowing to supervise exclusively or mainly hiking):
 - Professional Certificate in Popular Education and Sport - Physical Activity for All (known as the BPJEPS APT qualification);
 - The Professional Qualification Certificate (CQP) Assistant activity leader, which includes an option for "local hiking and orientation".

Just to name a few.

THE PROFESSIONAL DIPLOMAS OF "MOUNTAIN HIKING"

Two main types of diplomas and professional qualifications allow, against remuneration, to guide hiking on mountainous terrain:

- The state-recognized diploma "High Mountain Guide" (GHM) which is in accordance with international standards, grants the graduate the rights to lead "clients" to any part of the world, even from flat-ground terrain by the coast to the highest mountains;

- The state-recognized diploma "Medium Mountain Accompanier" (AMM) which is also in accordance with international standards, grants the graduates to lead "clients" on hikes to anywhere in the world. The AMM is divided into two categories:
 - Hiking in "medium mountains(potentially) snow-covered";
 - Hiking in "tropical and equatorial medium mountain areas".

GHM and AMM training is provided by the National Mountain Sports School (known as ENSM), which is an establishment under the authority of the Ministry of Sports. ENSM has two training sites:

- The National Ski and Mountaineering School (known as ENSA) in Chamonix in the Alps, where the training for GHMs is held;
- The Center for National Skiing and Medium Mountain (CNSNMM) in the medium mountain range of Jura, Premanon, where training for AMMs is held.

Here are the Internet links of these centers for those wishing to find out more:

- ENSM - <http://www.ensm.sports.gouv.fr/>
- ENSA - <http://www.ensa.sports.gouv.fr/>
- CNSNMM - <http://cnsnmm.sports.gouv.fr/>



Many other diplomas in France make it possible to supervise hiking, for example obtaining a license for a semi-professional supervisor, who can work in the framework of holiday and youth centers, or licenses for volunteer leaders issued by associations. Their prerogatives are, however, more limited than those of the professional diplomas of High Mountain Guides (GHM) and Medium Mountain Accompanier (AMM).





© UIMLA: hiking guide training by the Swedish mountain leader association (Sweden)



© MTUK: performing an assessment during the Mountain leader training in Lake district (England)

10.3- The hiking training courses in France



MEDIUM MOUNTAIN ACCOMPANIER (AMM)



Duties and responsibilities of the AMM

The State diploma of Medium Mountain Accompanier, AMM, attests, to the public, the competences of its holder to supervise, lead, teach, train in safety people or groups in a mid-mountain, excluding glacial areas and rocky areas, canyons and other terrains requiring the use of equipment or mountaineering techniques (terrain reserved for the high mountain guide).

This diploma also proves the specific skills of the chosen option:

- The "mountainous environment (potentially) snow-covered" for which the holder can work on terrain that does not require technical climbing and mountaineering equipment. On snow-covered terrain, they are authorized to guide hiking with snowshoes (skiing and its associated activities are excluded from their scope of practice);
- The "tropical and equatorial mountain environment" option, which allows the holder to work on the same terrain profiles in regions with a tropical climate, even during rainy seasons (terrain not requiring technical climbing equipment).

The professional knowledge and skills acquired through training allow AMMs to perform several types of functions adapted to the mountain:

- To be responsible for ensuring the safety of their groups;
- To design, coordinate, and conduct initiation, instructional, and advanced training programs in hiking for all profiles of people;
- To advise, manage, communicate and design projects related to the activities and organization of the profession;
- To promote and implement hiking practices that respect the environment.



The training courses of AMMs

To be able to enter training for the AMM program, you must first:

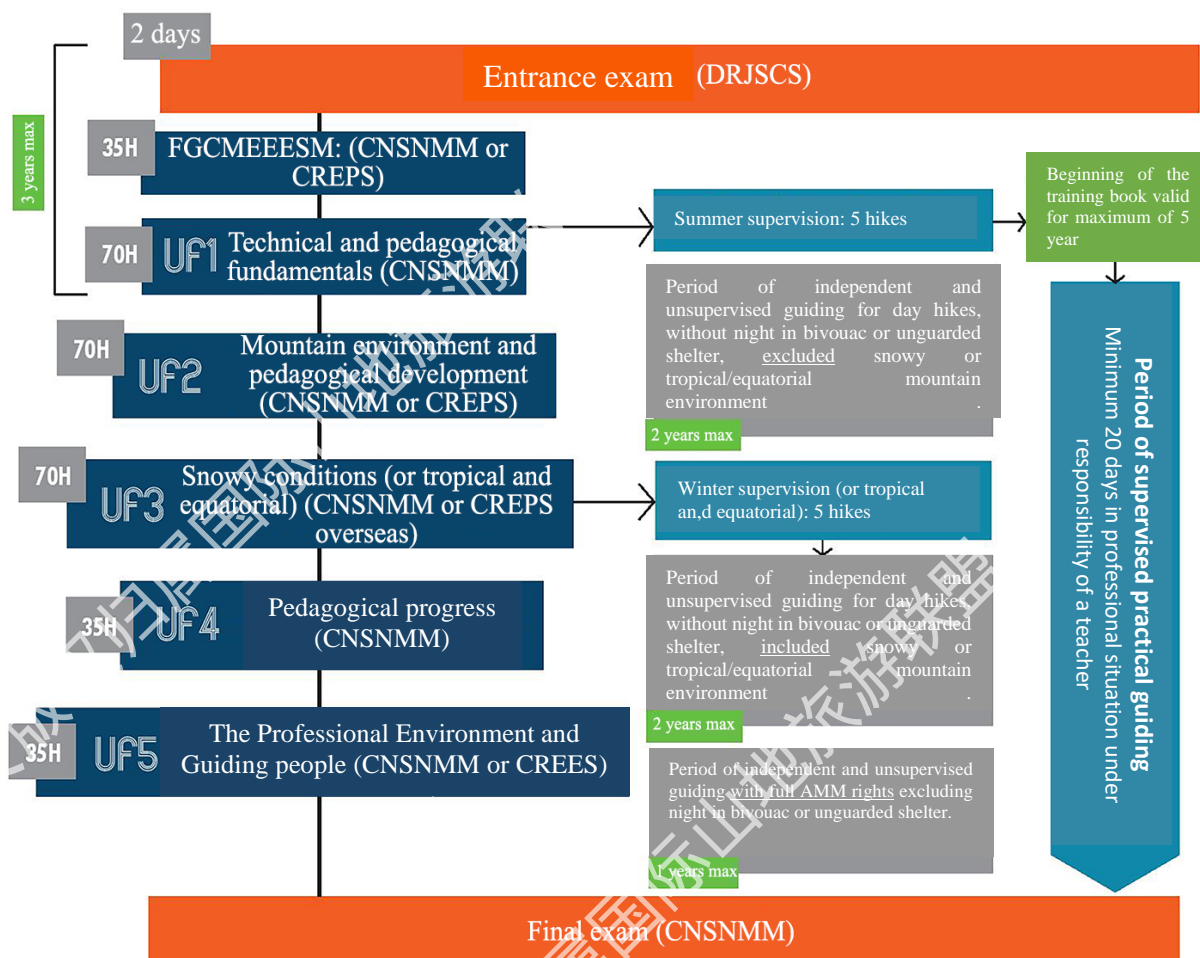
- Hold a first-aid diploma;
- Have completed at least 40 hikes of varying difficulties;
- Pass the entrance exam consisting of tests that evaluate:
 - Your physical condition:

- Your ability to orient and navigate varied terrain during a hiking and orientation test;
- Your general knowledge of the mountain environment through a multiple-choice questionnaire.

The training spans over 9 weeks + 35 days of practice in a professional situation (summer and winter), which is divided as follows:

- One week of joint training with the High Mountain Guide (GHM) and ski instructor trainees to acquire the general knowledge shared by these professions in the mountains:
 - The legal framework of the teaching, supervision, guiding and training professions in mountain sports;
 - The economic and tourism sector of mountain sports;
 - The natural environment of the mountains;
 - The welcoming different profiles of people in the mountains, including school groups;
 - The physiology of effort for the different activities in the mountains.
- Four weeks "in summer" to acquire specific knowledge, including:
 - The general safety of the AMM work environment;
 - The group leading on hiking;
 - The pedagogical processes;
 - The knowledge of the natural and human environment in the mountains.
- An additional two weeks depending on the option of choose:
 - Acquiring knowledge "for the winter in mountain terrain":
 - Safety in snowy terrain and avalanches;
 - Navigation;
 - Self-directed treks;
 - Protection and respect of the natural environment.
 - Acquiring knowledge "in tropical and equatorial terrain":
 - Safety measures during periods of heavy rain;
 - Navigation;
 - Self-directed treks;
 - Protection and respect of the natural environment.
- One week to acquire the below knowledge:
 - On adaptation to the effort, technical improvement and training processes for hiking;
 - On hiking-related activities (trail running and nordic fitness walk).
- One week of specific training:
 - Concerning the professional environment (the tourism legislation, the product design, the actors of the territory, etc.)
 - Concerning the supervision of specific publics (young people, schoolchildren, people with special needs such as the disabled).

AMM TRAINING PROGRAM



(Source: ENSM)

OTHER PROFESSIONNAL CERTIFICATIONS RELATED TO HIKING

The diplomas mentioned below (non-exhaustive list) are more like coaches' certificates. They are inferior in terms of practice rights compared to the rights of the high mountain guide (GHM) and the medium mountain accompanier (AMM) diplomas. The holders of this following diplomas also not authorized to work in glacial or rocky areas, nor on terrain requiring the use of mountaineering or climbing equipment or techniques for progress and safety.



The "Brevet Professionnel de la Jeunesse, de l'Education Populaire et du Sport": speciality hiking activity (known as BPJEPS)

Holders of this certificate can lead all types of publics on hikes but excluding any mountain environment, such as the discovery of a territory's natural, architectural, cultural or biological heritage. They can work in the planning and maintenance of sites and trails, design and manage tourist activities and products, organize events, etc.

The training consists of 1,200 hours of classroom instruction + 400 hours of outdoor training. It is divided into ten complementary UC (Units of Capitalizable training) allowing the holder to acquire the knowledge necessary for guiding of easy hiking, walking and cycling.



The "Brevet d'Aptitude Professionnelle d'Assistant-Animateur-Technicien de la Jeunesse et des Sports, option hiking" (known as the BAPAAT).

Holders of this certificate can work as an assistant to an AMM (medium mountain accompanier) or GHM (high mountain guide) during a hike, or work under the responsibility of the Director of the recreation center where the holder performs their duties. They can lead and teach alone and with complete autonomy, but only on marked paths officially listed, which are considered easily practicable for walking and hiking, and which do not include a change in altitude of more than 600 meters and are not covered with snow. Finally, the hikes that they can lead without being under the authority of a supervisor with a higher level of qualification may not include any night hikes or overnight stays in mountain huts or lodgings.

The training consists of 120 hours of classroom instruction plus an additional 35 hours of outdoor training under the responsibility of an AMM. This course allows the holder to acquire the knowledge of organizing and leading groups hiking, as well as the knowledge of mountain environment (weather, risk management, etc.)



The "Certificate of Qualified Professionals (CQP) option for local and orientation hiking".

Holders of this certificate can lead groups on local trails and organize direction-finding and navigation exercises.

The training lasts for 160 hours and allows the holder to know how to lead easy hikes and understand different profiles of publics.

FEDERAL CERTIFICATES FOR VOLUNTEER SKILLS

Many federations and associations organize their own training courses and issue their own certificates for volunteer (without remuneration) hiking leaders. Only the diplomas of the French Federation of Hiking (FFRP), which is the association accredited by the Ministry of Sports, are presented below.



The " Instructor of Local Hikes " (ARP1):

- The duration of the training is 25 hours;
- The training prepares the ARP1 to lead hiking trips of a maximum duration of one day and on routes classified as easy, and rated as 1 or 2 based on the physical effort and risk criteria of the federal rating system (refer to: frame below)



The "Hiking Instructor" (ARP2):

- The training is 65 hours + 20 hours of field practice;
- The training trains the ARP2 to lead hiking trips with relatively extensive guiding rights since he/she can lead on marked and unmarked trails and on multi-day itineraries. In mountainous environments, the ARP2 volunteer holders must stay on marked trails.



The " Alpine Hiking Coach " (AM):

- The training lasts 7 days and includes theoretical and practical work experience;
- The training prepares the AM to lead hikers on mountain walks. Within the framework of their benevolent activity, they can walk on marked or unmarked trails, off-trail, for long-distance itinerant hikes, in mountainous areas and without any altitude limitation. They are also authorized to lead groups through snowy terrain, loose rocks and steep grassy slopes but without any remuneration.



(Source: French Hiking Federation)
The grading scale of difficulty

Measuring the effort (physical challenge) of a hike: the FFRP provides a digital service that allows hikers to download the GPS track of their planned itinerary, in the computer application (IBP Index) specifically designed for this purpose. The latter calculates and returns an exertion score. The higher the score, the more physically demanding the hike. In addition to this score, the system provides precise data on the characteristics of the hike (route, slope, estimated time, etc.).



The FFRP has established a reference grid for scoring the difficulty of hikes: [FFRANDO-Guide-cotation.pdf](http://ffrandonnee.fr) (ffrandonnee.fr). The level of physical effort, technicality and the degree of risk is classified into five levels.



10.4 - The hiking training system in England



The United Kingdom and France have a similar percentage of their territory classified as being mountainous. However, the training system for British "hiking guides" is significantly different from the French one. The British system is less diverse and does not distinguish between professional and voluntary qualifications. It does, however, differentiate between diplomas that limit professional practice to the territory within the country and degrees that allow practice throughout the world (International Mountain Leader for hiking).

Training courses are delivered by the "Mountain Training in the UK & Ireland" (MTUK). This organization manages the country's professional qualifications for walking, climbing, and mountaineering. The MTUK groups together five specialized training providers: the Mountain Training Cymru (Wales); Mountain Training England; Mountain Training Scotland; Mountain Training in Board Ireland; Mountain Training in UK-Ireland. MTUK also collaborates with four associations involved in the training of mountain guides: Mountain Training Association (MTA), the Association of Mountaineering Instructors (AMI), the British Association of International Mountain Leaders (BAIML) and the British Mountain Guides (BMG).

For those who want to find out more, please visit: <https://www.mountain-training.org/qualifications>

The following is a brief description of the four diplomas and corresponding training courses.

THE "LOW-LAND LEADER"

The rights limit this low-land guide to leading groups on local trails (maximum of one day hikes) and in flat terrain (plains, flat forests) in summer conditions and limited to the national space.

The course of the theoretical and field training lasts 2 days + 2 days of final exam on the content of the training.

The content of the training teaches the student-leader of lowland hikes, the basic skills of:

- Guiding and managing groups of hikers;
- Planning a hiking trip;
- Being proficient at using maps and finding the right route - navigation
- Knowing well the equipments of the hikers ';
- Managing risks and emergency procedures;
- Handling weather-related concerns;
- Knowledge of the environment and the principles of nature protection;
- Being familiar with legal liability issues;

THE « HILL AND MOOR LEADER »

The rights entitle this guide to lead groups on trails in the countryside, forests, garrigue lands, Etc, in summer conditions and limited to the national space.

The training course lasts 3 days + 3 days final exam on the content of the training.

The training content teaches the same basic skills as the previous program but complements their specific knowledge in the field of practice.

THE « SUMMER MOUNTAIN LEADER »

The rights entitle the "mountain-summer" leader to lead groups on all types of trails in mountainous terrain in summer conditions and limited to the national space.

The training course lasts 6 days + 5 days final exam on the content of the training.

The content of the course teaches the student-leader of summer mountain hikes the same basic skills as the previous programs, but in greater depth and with additional knowledge of the specificities of mountainous environments. In particular, they learn to organize and lead "expedition tours" and to manage risks and emergency procedures, including in steep terrain and on rivers.

THE "INTERNATIONAL MOUNTAIN LEADER" (IML)

Its rights are identical to those of the international standard diploma, equivalent to the previously mentioned rights and duties of the French AMM. International Mountain Leaders (IMLs) is qualified to supervise, guide, teach and coach all profiles of people, in any place, regardless of the season, including snow-covered terrain, but excluding glaciers or when using climbing/mountaineering rope techniques.

The training course for the IML: "mountain-summer" leader's diploma is required to access the training program. Advanced training is carried out as per the following:

- 5 days of training + 4 days of examination, during the summer periods with part training in other European countries;
- 5 days of training, + 5 days of examination, during the winter periods with part training in other European countries;



The content of the training teaches IML to:

- Identify and master the dangers of the mountain environment and weather hazards;
- Be familiar with the legal and economic situation in the countries where IMLs are employed (across all continents, Alpine countries, **Europe, Nepal, Tanzania, Kenya**, etc.);
- Know the responsibilities of what it means to be a hiking guide;
- Be able to manage groups of hikers and evaluate their physical potential;
- Be an effective educator and mentor in matters of hiking;
- Possess basic knowledge of anatomy and physiology;
- Be able to navigate all types of hiking terrain;
- Be familiar with mountain safety and emergency procedures;
- Understand snowy terrain, its specificities and its risks;
- Manage and organize expeditions, manage a bivouac, and know how to use emergency survival techniques;
- Etc.

The major international associations in hiking and its training courses

Each in its own field represents, promotes, regulates, harmonizes and standardizes the profession, training and practices, and encourages its sustainable and respectful development throughout the world.

The major international hiking associations are:

- UIAGM - Union Internationale des Associations de Guides de Montagne (International Union of Mountain Guides Associations) which brings together 20 countries from Europe, Asia, America and Oceania, representing a total of about 6,000 mountain guides of international standard.

The countries from which its national member associations originate are **Argentina, Austria, Bolivia, Canada, Czech Republic, Ecuador, France, Germany, Italy, Japan, Kyrgyzstan, Nepal, New Zealand, Norway, Peru, Poland, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States.**

<https://ifmga.info/>

- UIMLA - Union of International Mountain Leader Associations - Hiking Guides.

The member groups come from 21 countries: **Andorra, Argentina, Austria, Belgium, Bulgaria, Switzerland, Czech Republic, Germany, Spain, France, Croatia, Italy, Japan, Republic of Northern Macedonia, Netherlands, Peru, Poland, Romania, Slovenia, Slovakia, United Kingdom.** Aspirant-member countries are those of **Bolivia, Chile, Greece, Hungary, Nepal, Sweden.**

<https://uimla.org/>





The major associating organizations are:

UIAA - International Climbing and Mountaineering Federation which gathers 90 organizations from 67 countries on six continents:



- Africa: **South Africa, Morocco;**
- South and North America: **Argentina, Brazil, Chile, Costa Rica, Guatemala; Alaska, Canada, Mexico, USA;**
- Asia: **Afghanistan, Azerbaijan, Bangladesh, China, India, Indonesia, Iran, Israel, Japan, Kazakhstan, South Korea, Malaysia, Outer Mongolia, Nepal, Pakistan, Saudi Arabia;**
- Oceania: **New Zealand;**
- Europe: **Albania, Austria, Belgium, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Spain, France, Finland, Germany, Georgia, Great Britain, Hungary, Italy, Ireland, Kosovo, Liechtenstein, Lithuania, Macedonia, Malta, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Sweden, Switzerland, Turkey, Ukraine.**

<https://www.theuiaa.org/>

- **EUMA** - European Mountaineers Association which is made up of member organizations from 22 countries: **Albania, Austria, Belgium, Bosnia and Herzegovina, Croatia, France, Great Britain, Greece, Italy, Liechtenstein, Northern Macedonia, Malta, Montenegro, Norway, Netherlands, Poland, Czech Republic, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland.**



<https://www.european-mountaineers.eu/>

- **ERA-EWV-FERP** - European Hiking Federation which unites 65 hiking associations from 35 countries (refer to Chapter 8 - P1)
<http://www.era-ewv-ferp.com/fr/accueil/>







10.5 - Professional responsibilities

Hiking is not an activity without the risk for the people who are guided, whether by professionals guides, volunteers leaders or third parties in the same space. A single accident (e.g., a fall) can result in a double liability:

- Civil liability for financial compensation of physical, financial or emotional damage caused;
- For Criminal liability in respect of a wrongful act by the injured party that constitutes a criminal offense.

The legal principles set out below must be read in accordance with the legal framework of each country, but in general, they are found in various forms everywhere.

Civil liability is insurable.

On the other hand, the perpetrator of a criminal offense is always a personal liability, whether the offender is a guide or a legal entity (association, organizer of the hike or the guide's employer).

The liability of the participants or the organizers appears mainly in the case of a fatal accident or one that has resulted in serious injury.

CIVIL LIABILITY

Civil liability refers to the obligation to compensate for damage resulting either from the non-performance of a contract or from the violation of the general duty that one has caused damage to others, either by:

- His or her own doing;
- As a result of the people for whom the guide are responsible for;
- For the fact that the person is responsible for things in his or her custody (liability in tort or quasi-liability).

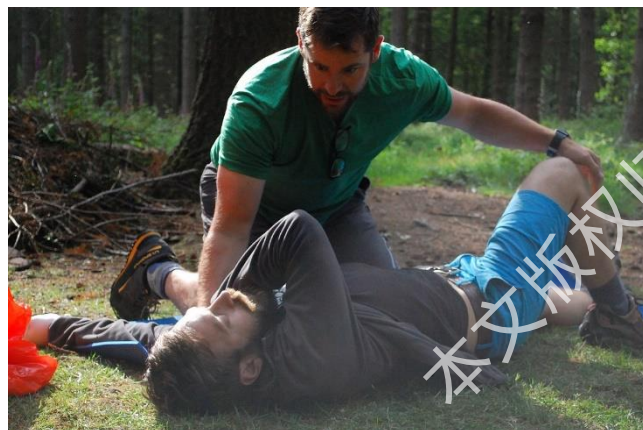
Civil liability leads to the compensation of the prejudice suffered by the victim (or the family), in the form of compensation for damages that can be taken over by an insurance company.

Duty of care

The first and foremost obligation of the guide is to ensure the safety of the participants.

Except in very particular cases, this obligation means that the guide, the organizer of the hike, the employer of the guide, are responsible for the means and measures which must be taken to ensure safety and prevent accidents, depending on the planned tour, the physical abilities of the participants (who must be tested beforehand), the weather conditions, the nature of the terrain, and so forth.

During a hike, the guide or supervisor must have the appropriate equipment, abide by the "rules of the art" and know when to give up in case of danger.



If civil liability is invoked, the person(s) responsible will have to compensate the victim or his/her beneficiaries for all the losses (not only equipment but also physical and mental). There may be several people responsible, in parallel or in a cascade effect (for example, from the guide to the organizer of the hike, from an individual to the club as a legal entity, as well as leading to the responsibilities of its club president).

In the case of mountain accidents, the most frequently cited faults are carelessness and negligence, both of which exacerbate the fate of the person or persons responsible.

Here are some examples of an individual at fault or collaboratively at fault:

- The absence of verifying the physical level of each person taking part in the trip;
- The failure to adapt the hikes' level of difficulty to the participants' capabilities;
- The neglect of weather forecasts or on-ground conditions (e.g., whether the trail is snow covered);
- The lack of supervisory or control on one or more participants (e.g., due to the over-subscription of the guided tour);
- The lack of support and advice from the guide (a requirement that they are to be informative, providing guidance and assistance to ensure the safety of group members);
- The failure to grab the participants' attention for risks (e.g., rockslides, potential risk of slipping, technical difficulty to climb);
- The leaving of a group member behind who is tired or has slowed down;
- Etc.

CRIMINAL RESPONSIBILITIES

Due to the transgression of the law and its regulations (also known as an offense), criminal liability pursues an objective of sanctioning and dictating the perpetrator, whether the person is natural or legal.

If the fault of endangering others is purposefully

The perpetrator had not intended to do any harm, but he knowingly and willfully violates a safety guideline of a standard regulation and endangering the lives of others.

There are not that many regulations that sets the safety standards for ensuring outdoor activities such as hiking, so that the criminal liability of guides and hikes organizers is rarely aligned on these grounds (unlike for example driving a car, where if a driver is in a hurry or who overtakes without taking a clear look and causing an accident while crossing a solid line).

If the fault of endangering others because of recklessness or negligent behavior

This are the circumstances for most of accidents on guided hikes. The perpetrator, at the side of accident which resulted in physical harm (homicidal or seriously injured), would not have done so on purpose. However, if the guide was found to have not respected the behavior of a diligent person, or failed to comply with being prudent on legal and regulatory matters (for example, having chosen to guide the group through a dangerous trek), then, a criminal offense could be present.

THE INSURANCES

The best protection for hikers, guides (professionals and volunteers), club leaders, against the risks of accidents and declaration of liability, whether civil or criminal, are:

- Training and experience;
- To comply with regulations and recommendations as dedicated by the industry;
- To abide by the insurance policy.

The insurance policies cover the professional civil liability of the guides and leaders of associations as well as anyone related to the activity under the organization.

During a hike, the guide, whether professionally or voluntarily graduated, can be the cause of an incident or accident involving his responsibility. The damages can be caused to hiking participants, to external third party, to the goods and gear under his responsibility. In addition, the guide may be fined with expenses, such as those for conducting a mountain search or other rescue efforts.

If the responsibility of the guide is recognized, the sums to be paid can be considerable, especially if the victim remains in a critical condition, or if there are multiple victims. If insurance is available, the insurance company will cover (as per contract) the financial consequences of the accident about the victim(s).

In countries where professional practices are in place, guides are not allowed to exercise their profession without being covered by the appropriate professional insurance. A basic coverage includes:

- Third-party liability (precisely defined for insured activities and maximum coverage);
- Search and rescue, medical evacuation, medical assistance and transportation costs;
- Injury to the guide himself (including permanent disability or death);
- Covers legal expenses with providing advice, defense statements and settlement of claim.

If the guide transports his/her group of hikers in a vehicle, a special statement must be made concerning road safety. Check with the insurance company (of the guide's or the travel organizer's) to ensure that the participants are covered during transportation.

If the guide uses a donkey (refer to P1 - Chapter 8) to accompany the group, it is advisable to check with the insurer (of the guide or the group organizer) that the transport of luggage, injury of a person or personal property during the hike or during overnight storage and whether the death of the donkey (in this case) is covered.

If the guide offers an "all-inclusive" tour, i.e., a hiking trip that includes all the services directly or indirectly related to the trip, the guide (or the sales organization) must take out a "tour organization" insurance.

The guide and the organizer must identify the activities, services, and equipment that may be hazardous.

Lastly, working as a guide in a foreign country requires checking civil liability and search rescue repatriation insurance to ensure that you have reliable insurance.

Required actions during an accident

It is important for the guide to declare the accident to your insurer, whether you are the victim or likely to be the one held responsible, and for the organizations organizing the hikes (associations, clubs, tour-operators) to inform their insurance company.

No accident should be considered minor. It is, in most cases, hard to predict the severity of the injuries or the after-effects it may bring.

It is better to make one too many insurance claims than not making enough. If no declaration is made, the insurance will not be of any use!

Factors taken into account by the magistrates in the event of an accident whilst on a hike

1. The information given by the guide to the participants: in written form (such as an e-mail, leaflet, flyer), verbal exchanges (briefing conducted on departure, instructions given during the hike);
2. The adequacy between the complexity of the hike and the physical level of each participant;
3. The total number of people in the group;
4. The safety of the itinerary chosen by the guide (including planning, assessment, information gathering before the trip and so forth);
5. Official weather forecast for the trip;
6. Potential management failures;
7. Defects in the provision of emergency equipment such as first aid kit, SOS calls, and means of transmission in the guide's possession.

(Source: CNISAG - Center for National Training of Skiing and Mountaineering of the Gendarmerie)





© Gianni Crestani by Pixabaym, refuge with guardian in the Dolomiti Mountains (Italy)



© Community of the Pays de Mortagne region, completing associative training in trail marking techniques (France)

10.6 - Additional training

In addition to the hiking guide diploma courses described above, many regional organizations are developing training programs related to hiking, territory, and tourism. For instance, universities, colleges, trade unions and associations offer specific vocational programs that are complementary to hiking guide certifications.

The following are examples of four types of training on offer in **France** that are more or less associated with hiking:

- Training to prepare for the entrance exam for becoming hiking guide, to have an appropriate level facilitating access to the formal Medium Mountain Accompanier (AMM) courses. To enter the professional AMM program, the candidate must pass a set of highly demanding tests. Therefore, many candidates choose to take this pre-entry training course. These pre-training courses are also financially subsidized by government to help job seekers who chooses this career path;
- A hiking trail designer is often a hiking guide (with an AMM, BAPAAAT, BPJEPS or similar qualification), sometimes with extra training in regional planning and local development. This job allows the creation of hiking routes and trail networks, examining their feasibility, drawing up specifications, carrying out the work and facilities, monitoring its execution, and planning related services (lodging, shelters, access, information centers, and so forth). The hiking trail designer will have the same professional profile as a project leader as described in Part 2 of this study (refer to Part 2 - "Your Trail Project");
- A trail developer, route marker, maintainer, guidebook designer, to name a few, are professions and skills that fall under the same type of training that would prepare them for the design and management of specific tourism products around the trails and hikes.
- The manager of shelters and stopover lodges is an occupation that involves managing an accommodation and food service establishment in the wilderness and mountain environments. The recipients of this diploma work in the 290 shelters in **France** (located exclusively in the mountains). Many operators of hiking retreats also take this training to acquire the necessary skills to manage their establishment more efficiently. This profession is represented by the "Syndicat national des gardiens de refuge et gîtes d'étape", their website is www.sngрге.fr;

EXAMPLES OF EDUCATIONAL INSTITUTIONS AND THEIR TRAINING COURSES



THE REGIONAL AND EUROPEAN TOURISM CENTER, CRET (FRANCE)

The CRET is located in the heart of the Hautes-Alpes in the town of Briançon. The establishment, which belongs to the region's Board of Trade and Industry, does not have the authority to award diplomas, but it successfully organizes pre-entry training courses in preparation for the State Brevets in the Mountain professions. The objective for the students of this program is to acquire the necessary skills needed to pass the entrance exams to access the formal AMM and GHM training courses.

Training is organized by duration of one week: 35 hours for a cost of 367€. The programs can be of different intensities and levels. The price is on a sliding scale and is calculated according to the number of weeks the student completes the training.

Program outline:

- Physical preparation and training management, psychological preparation for the exam and stress management;
- Mapping, orientation, use of compass, altimeter and GPS (basic principles), navigation under exam conditions;
- Acquisition of knowledge of geology and meteorology, flora, fauna and the human environment in the mountains;
- Learning how to move in varied terrain, mountain safety techniques, best practice during winter conditions, practicality training to reinforce the experience, and so forth.

Theoretical sessions held in the classroom alternate with practical outings and/or observations in the field, using technologies such as video and other digital media and software to ensure effective feedback and evaluation of the training and to accompany the trainees in their progress. Training includes a mock exam (i.e., conducting the same tests under the same conditions as the real exam).

(Source: www.cci05formation.fr)



THE NATIONAL UNION OF REFUGE GUARDS AND GITES D'ETAPE (FRANCE)

Nowadays, as a result of the growth of hiking and nature tourism, shelters are an essential part of mountain tourism. This is particularly true in the mountains of Europe.

Qualifying training courses have been set up to ensure that shelter guards can provide services in a professional manner under good conditions, as well as carry out public service missions (surveillance, alerting the rescues, collaborating with meteorologists, providing advice and information to hikers and mountaineers, offering shelter, and informing the people about environmental protection).

The student-guards thus follow four teaching units comprising a total of 360 hours:

UE 1/Knowledge of the mountain environment

- Relationship with mountain professionals and meteorological services;
- Navigation and cartography;
- Nivology (for example, ability to forecast a short-term avalanche hazard);
- Environmental management of the shelter, with a focus on sustainable development.



UE 2/Marketing and communication

- Communication, marketing, and commercialization;
- Advanced web-marketing tools;
- Communicating in professional English

UE 3/Organization, accounting and operating methods of a shelter

- Accounting and financial management;
- Law (public service obligations, buildings open to the public, labor law and tax law related to the shelter's activities);
- Reception and catering techniques, permits to operate, and HACCP training;
- Cooking techniques;
- First aid.

UE 4/Internship in a shelter management role for a minimum of six weeks

(Source: www.sngsge.fr)



THE " PROFESSIONAL LICENSES " OF THE FRENCH TERRITORY AT THE UNIVERSITY OF GRENOBLE-ALPES (FRANCE)

These are eight-month vocational training courses at universities that provide skills in designing and managing tourism products to meet the specific needs of the regions.

The profession of a "Heritage Tourism Product Designer"

Students study territorial and tourism challenges and methods of project development. They learn how to welcome people, how to make good use of environmental resources, how to create, sell and market products. They are trained to master the methods and tools of territorial intelligence (territory diagnosis, project facilitation, strategic planning, mapping, setting up a survey, etc.).

Their employers are tourist agencies, development agencies, local authorities, tourist or cultural associations, natural and/or cultural sites, private operators in the creation of tourist activities, etc.

The profession of a "Manager of Natural Leisure Areas"

The training covers territorial issues with a focus on development, maintenance and protection. Students learn to conduct projects, manage sites, equipment, facilities, development and protection of natural areas, and mediate between the various stakeholders. They are trained to master the methods and tools of territorial engineering mentioned above.

Their employers are conservation areas, local authorities (development, environment and sports/leisure departments), agricultural organizations, sporting federations and associations, non-profit organizations for the protection and management of natural areas.

These training courses fully match the skills needed to manage sites and projects around trails and hiking (refer to Part 2 "Your trail project" which explains the development and management of this type of project).

(Source: www.formations.univ-grenoble-alpes.fr/fr/catalogue/licence-professionnelle-DP.html)





KEY POINTS TO REMEMBER





SAFETY AND RESCUE OPERATIONS ON TRAILS

11

Rescue is the essential service in any outdoor recreation and sports development strategy, of which hiking is one.

Most hiking accidents occur on mountain trails or other natural environments, which are potentially dangerous and little or not developed. These are privileged areas for such recreational and tourist practices.

It is, therefore, special relief services have been established in mountainous areas of countries that use tourism and outdoor sports as tools for economic development.

Considering the vast numbers of hikers, hiking cannot be said to cause many accidents. However, the number of hikers involved in this accessible activity is such that the total number of rescue operations conducted for hiking is greater than for any other mountain sports.

This chapter introduces the mountain rescue organizations in different European countries and gives an overview of hiking accident statistics.

CHAPTER SUMMARY

- 11.1 The different mountain rescue systems in alpine countries
- 11.2 Accidentology for hiking
- 11.3 Rescue, the object of international technical cooperation



©Peloton de Gendarmerie de Haute Montagne – PGHM (mountain rescue team of the French Gendarmerie): rescue of a hiker in the Alps (France 2018)

11.1- The different mountain rescue systems in alpine countries

In collaboration with Lieutenant Stéphane BOZON, Commander of the Peloton de Gendarmerie de Haute Montagne (Haute Savoie - France)



THE RESCUE SYSTEM IN FRANCE

In the 19th century, with the development of hiking and mountaineering tourism in the Alps, and an increase in the number of accidents, the first groups of volunteer rescuers were organized in various border countries.

In France, a tragic accident occurred in the high mountains in 1956, and it drew the attention of the media, highlighting the failures of the various volunteer rescuers on the one hand, and the army on the other hand. After this accident, the French government decided that a professional unit of the Gendarmerie with a military status shall take responsibility for organizing mountain rescue operations.

Today, the public service manages the rescue interventions through three organizations:

- The army officers of the Pelotons de Gendarmerie de Montagne (PGM in the middle mountains and PGHM in high mountains)
- Police officers from the Compagnies Républicaines de Sécurité (also in the mountains)
- Firemen (on the whole national territory (except for the main alpine ranges))

Each department has its own rescue plan, which stipulates the intervention personnel in case of accidents in natural space and mountainous areas. The rescue interventions during hiking (as well as for all other outdoor activities, excluding winter sports in ski resorts) are free of charge. Indeed, the general principle of carrying out free rescue in France goes back to a royal decree of Louis XV dated March 11, 1733.

However, since the municipalities are responsible for organizing emergency services on their territory, they may have to resort to on private resources. In this case, they must pay the rescue operation expenses and may rebill the costs to the victim or his/her legal beneficiaries.

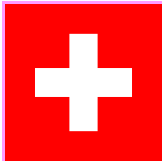
The emergency number is 112. Some rescue operations, which sometimes receive media coverage, provide material for debate, something that has been ongoing over the past two decades, between the advocates of free rescue services and those who argue that people should pay for their own rescues.



THE RESCUE SYSTEM IN ITALY

Rescue operations are carried out by the National Alpine Cliff and Cave Rescue Corps (CNSAS), a specialized division of the Italian Alpine Club funded by the Italian State, regions and provinces. The rescue is free of charge for the rescued person and the emergency number is 118.

The region of the Aosta Valley has its own mountain rescue service, the SAV. The SAV is a local institution that represents the CNSAS in this mountainous region, which is the most visited and the most requested area for rescue. The rescue operations are free of charge when the rescue leads to hospitalization, and when the emergency service believes that there is no need for treatment or hospitalization, the victim will pay. In this case, the rescued person has to pay a fee to the rescuers according to a rate set by a regional decree, as well as the helicopter costs according to a pre-determined hourly rate. This strategy prevents people from abusing the rescue service and calling for it in cases when it is not necessary.



THE RESCUE SYSTEM IN SWITZERLAND

The Swiss cantons are in charge of the rescue operations and provide financial contribution for the rescue organizations. The canton of Valais has the Organisation Cantonale Valaisanne de Secours (OCVS): a private rescue organization recognized by the Swiss State as being of public utility. The emergency number is 144.

Outside of the Valais, the Swiss Alpine Club (SAC) provides rescue services in the mountains and in the wilderness, in collaboration with the Swiss Air Rescue Service (REGA), which is a non-profit foundation incorporated under private law and is the largest Swiss air rescue organization. It is financed by donor contributions. The emergency number is 144.



THE RESCUE SYSTEM IN GERMANY

The Mountain rescue operations are the responsibility of the Länder. The Land most concerned by the rescue of hikers is the mountainous area of Bavaria, which includes part of the Alps.

The rescue interventions on trails are the responsibility of local intermunicipal associations which entrust their rescue operations to private operators and with which they sign contracts. The two main private operators handling this task are the Red Cross and the ADAC (Allgemeiner Deutscher Automobile Club) which provides 55 rescue helicopters from its 37 bases throughout Germany. The emergency number is 112.

The financing of the rescue services is shared according to a ratio determined by law between the Land and the reimbursement of the costs by the health insurance companies or by uninsured victims who must also reimburse the fixed administrative and air transport fees (ranging from 180€ to 300€ per minute).



THE RESCUE SYSTEM IN SPAIN

The rescue operations are carried out by the Mountain Rescue and Intervention Service (SEREIM), a specialized division of the Spanish Civil Guard that can operate throughout the entire country's territory.

However, some autonomous communities have created intervention teams of firefighters and police that are dedicated to their own regions (Catalonia, Asturias, Basque Country, Madrid and Canary Islands). The emergency number is 085 in Catalonia, 112 in Aragon, Navarre, and Andorra, 088 in the Basque Country.

Whether it is provided by SEREIM or by any ad hoc services of the autonomous communities, the mountain rescue is a public service financed by the State budget or by that of the autonomous communities and is provided free of charge. In principle, because some communities opened the debate about free and partial fees from victims. This is the case today in Southern Catalonia, which has chosen to apply this provision (for the last ten years); the price of the intervention is fixed according to the number of people rescued and the time spent on the intervention. This can result in a hefty bill: 2270€ per hour for the use of the helicopter and 30€ per hour for each rescuer.



THE RESCUE SYSTEM IN AUSTRIA

The rescue interventions on trails and in the mountains fall within the competence of the Länder and the operational system varies in each Land, which can entrust rescue service to the municipalities or by contract to any authorized organizations that is recognized as being of public utility. The emergency numbers are 140 and 112

Tyrol is the most concerned Land, with more than one-third of the recorded rescue interventions. The local directorate of the Austrian Mountain Rescue Service (Österreichischer Bergrettungsdienst), a non-profit organization, is responsible for these operations.

The state provides 50% of the funding, the other half of the expenses are covered by donations and the income from the rescue operations. Depending on the circumstances, the local branch of the Austrian Mountain Rescue Service decides whether or not to require the victims to pay a fee.

As a general rule, the victims are asked to pay a reimbursement of expenses up to 70€ per rescuer and per hour of intervention, for the use of the helicopter and a contribution corresponding to the use of the equipment and the related communication costs.

International Commission for Alpine Rescue (ICAR)

The ICAR, founded in 1948, is an association incorporated under Swiss law with its headquarters in Switzerland. It is an independent, worldwide organization whose mission is to provide "a platform for mountain rescue and related organizations to disseminate knowledge with the prime goal of improving mountain rescue services and their safety." ICAR has no commercial purpose and is nonprofit oriented.



It currently has 103 member organizations in 43 countries around the world: **South Africa, Germany, Andorra, England, Argentina, Australia, Austria, Belgium, Bosnia, Herzegovina, Bulgaria, Canada, Chile, China, South Korea, Croatia, Cyprus, Scotland, Spain, the United States, France, Greece, Ireland, Iceland, Italy, Japan, Kyrgyzstan, Liechtenstein, Macedonia, Mexico, Montenegro, Nepal, Norway, New Zealand, the Netherlands, Poland, Czech Republic, Romania, Serbia, Slovakia, Slovenia, Switzerland, Sweden, Tanzania.**

The ICAR Assembly of Delegates is usually held in October at the ICAR Annual Convention, which is alternately hosted by one of its member organizations.

ICAR has four commissions that meet once a year at the invitation of a member organization:

- The Terrestrial Rescue Commission
- The Avalanche Rescue Commission
- The Air Rescue Commission
- The Alpine Emergency Medicine Commission

Each commission is interested in all aspects of search techniques and rescue systems in its field by sharing experiences and best practices.



11.2- Accidentology for hiking

In collaboration with Claude JACOT, Head of the National Mountain Safety Observation System, SNOSM (France)

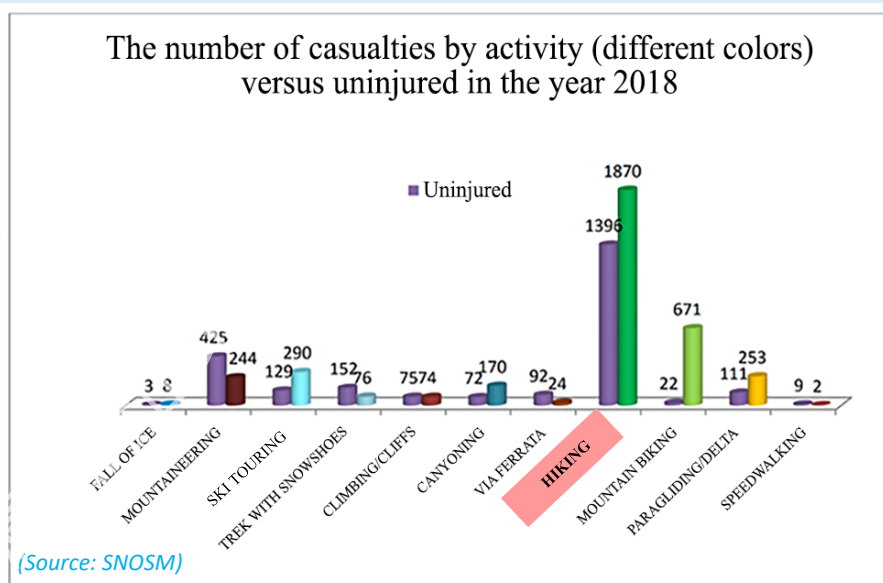
In 1997, the French Ministry of Interior and the Ministry of Sports co-founded the National Mountain Safety Observation System (SNOSM) to observe and study mountain accidents. The office is located in the Alps at the École Nationale des Sports de Montagne (ENSM) in Chamonix. The SNOSM's scope of observation and study focuses on mountain rescue operations in the country, and concerns between 6,000 and 8,000 people that are rescued every year.

MOUNTAIN HIKING ACCIDENTS ACCORDING TO THE SNOSM

The main sports activities are taken into account in the SNOSM analyses with comparisons in terms of number, severity, situation, etc. The following is the main data of the 2018 hiking study.

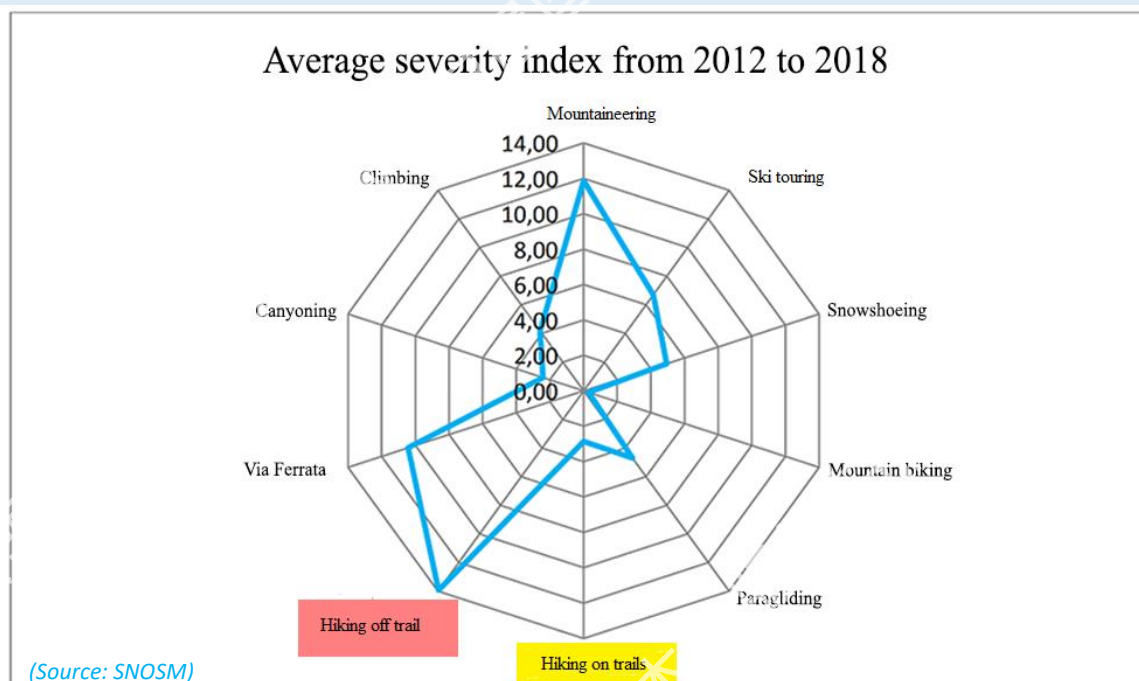


TABLE 1: Comparative information according to the different practices and the number of people who requested help.



In the column, the number of injured hikers is highlighted in dark green, while the number of uninjured hikers is highlighted in purple. This is a comparison showing the total number. It is impossible to take these numbers into context by taking into account the number of hikers, because they generally practice independently; so, their number is unknown. Nevertheless, these numbers show that hiking, for its simplicity, is by far the most practiced activity.

TABLE 2: Comparison of the accident severity rates according to the different practices



The accident severity rate is calculated by dividing the number of deaths by the sum of the number of injured hikers and dead hikers. It is expressed in %. The number of people rescued without any injuries or hikers who got ill is not taken into account in this table. However, a distinction has been made between accidents involving hikers on trails (yellow) and hikers off trails (red).

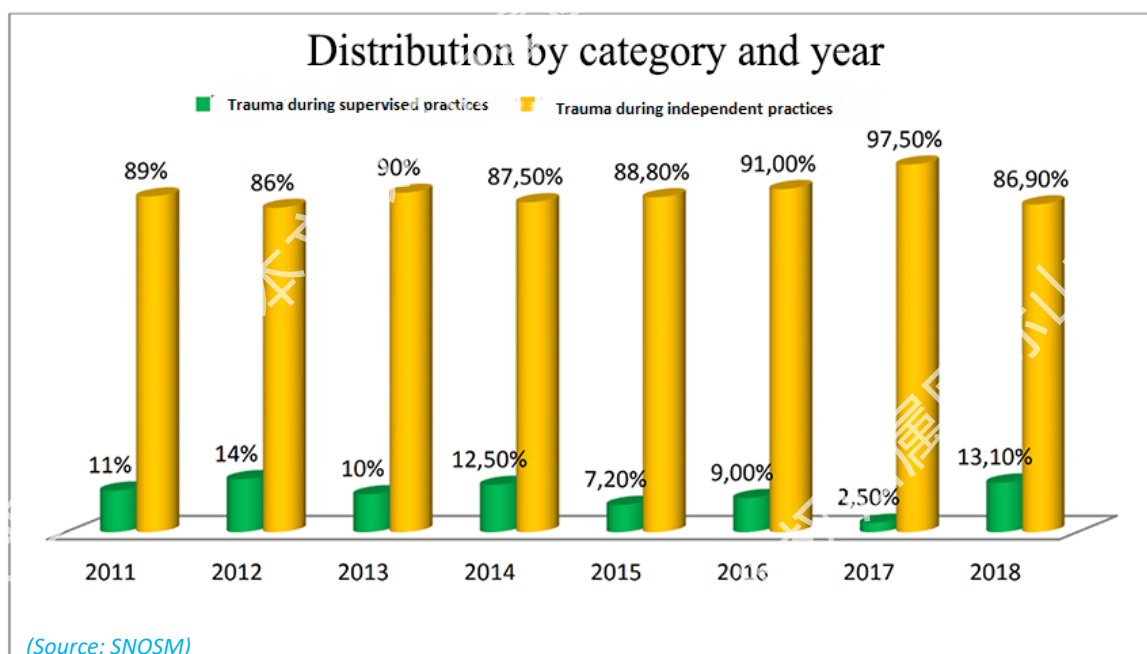
The results show that accidents have little impact on hikers on trails but have severe consequences for hikers off trails. Quantitative data indicate that almost all "off-trail" hiking accidents are due to slips and falls and the severity of these "off-trail" hiking accidents is often related to the age and physical condition of the victims (hiking being the preferred activity of seniors).

TABLE 3: Comparison of the severity rates according to the different practices and variation depending on the year

	2012	2013	2014	2015	2016	2017	2018	Average
Mountaineering	11,945	8,442	13,011	14,074	12,715	9,609	13,262	11,87
Ski touring	7,317	6,322	6,395	11,872	2,930	3,302	8,805	6,71
Mountain biking	0,169	0,578	0,158	0,378	0,252	0,220	0,297	0,29
Paragliding	5,366	5,357	4,188	4,651	5,703	4,138	3,435	4,69
Hiking on trails	2,744	3,259	3,191	3,348	2,353	2,633	2,553	2,87
Hiking off trails	13,836	13,736	13,492	16,901	7,333	16,970	15,244	13,93
Via Ferrata	17,647	16,667	16,667	6,667	3,333	8,000	4,000	10,43
Climbing	5,405	3,488	2,410	5,634	3,922	4,494	3,896	4,18
Canyoning	3,968	1,667	1,974	2,381	1,015	1,376	4,494	2,41
Snowshoes hiking	8,475	4,762	2,564	13,889	0,000	2,326	2,564	4,94

(Source: SNOSM)

TABLE 4: Comparison of accidents between independent (without guide or teacher) and supervised



This table shows that, for all outdoor activities, the number of accidents is much lower if the activities are practiced in the framework of clubs, professional agencies, or with qualified guides.

ANOTHER EXAMPLE OF ANALYSIS

ANOTHER STUDY OF ACCIDENTS IN MID-MOUNTAIN AREAS (FRANCE AND SPAIN)

An observational study of the population of hikers, that were injured during the summer season from 2006 to 2009 in the mid-mountain region of the Basque Country (the Pyrenean range between **France** and **Spain**), was conducted by the SMUR of Bayonne (Mobile Emergency and Resuscitation Service) on 140 accident files. The conclusions of this study are as follows:

- Among the victims, 72% were tourists and 28% were locals;
- 35% were inexperienced and 40% had average experience;
- Nearly 60% had inadequate equipment and insufficient compliance with the basic safety instructions;
- An average age of 55 years old;
- Two-thirds of victims had at least one pre-existing medical condition;
- 80% of the accidents occurred during descents (falls, slips, etc.).

Generally speaking, unlike most other sports activities, hiking is a mass tourism and sports activity whose accessibility also makes it the main cause of accidents in absolute value.





©Serge Koenig: Stupa hidden between fog and sun during a hiking trail in the mountains of Western Sichuan (China 2016)



11.3- Rescue, the object of international technical cooperation

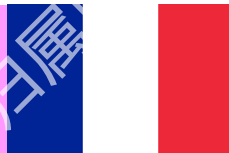
In parallel with the International Commission for Alpine Rescue (ICAR), whose missions are to provide an international framework for research on mountain rescue techniques, to standardize specific equipment, and harmonize the prevention strategies, etc. The rescue systems of the various countries also conduct their own foreign cooperation.

Prevention and rescue are indeed a key component of any ambition to develop outdoor tourism and outdoor sports, especially in mountainous areas, and developing countries in this field are often keen to learn from more experienced countries.

EXAMPLE OF INTERNATIONAL EXCHANGES



RESCUE COOPERATION (CHINA AND FRANCE)



- The French-Chinese training courses organized in 2008 and 2009 between the professional rescue of Chamonix (National Center for Ski and Mountaineering Training of the Gendarmerie, CNISAG) and the firemen of the Public Security Forces of Chengdu;
- The French-Chinese training courses organized from 2011 to 2013 between the CRS Mountain Rescue Training Center in Chamonix and the Mountain School of Lhasa.



(Source: Archives of the Alps-Sichuan Cooperation)



KEY POINTS TO REMEMBER





RESPECT FOR ENVIRONMENT AND BIODIVERSITY

12

Tourism in wilderness and outdoor experiences, once reserved for insiders, have now become mass tourism in some places. This evolution pushes the insiders to ever more remoted areas. Hiking is not exempt from this popularization phenomenon, including adventure expeditions such as trekking. Humans are therefore entering the wilderness inhabited by native animal and plant species in growing numbers and in ever greater profundity as a recreational activity. The pressure on natural environments and their ecological vulnerability are generally proportional to the growth of visitor numbers and human activities.

Thus, developments and behaviors that are not always ecologically responsible mean that today, once free, and open places have been regulated and protected. Sometimes the development or modernization of existing infrastructures and facilities is not authorized anymore. In some cases, any human activity is forbidden. In fact, in spaces full of people, we cannot act the way we used to act in spaces that were almost empty of people.

Regulations, rules, education, attitude, compliance, knowledge, etc. are becoming more and more important for designers, developers, managers and tourists or hiking enthusiasts. These rules are conditions to maintain economic profitability in the long term and to preserve both the integrity of the surrounding nature and the authorization to access it. A healthy natural environment and the freedom to enjoy it are two essential factors for the physical and mental well-being of communities.

This chapter analyzes the problem posed by hiking activity on the trails and their surrounding environment. It makes recommendations and provides guidelines for the management of hiking sites and the planning of events.

CHAPTER SUMMARY

- 12.1 Academic literature on the impact of hiking
- 12.2 The limits of the reception capacities of a natural site and its trails
- 12.3 The eco-responsible commitments of the trail manager
- 12.4 The eco-responsible commitments of the trail events manager



12.1 - Academic literature on the impact of hiking

Walking tours are often advertised as a low-impact, environmentally friendly, and this type of recreation and tourism is, of course, one of the least disruptive human behaviors. However, anyone who has hiked a popular trail in a fragile environment such as the mountains will have noticed the degradation that can be caused by the flow of users (refer to P1 - Chapter 6).

In addition to having negative effects on the experience of hikers walking along a trail in degraded conditions, trampling have also an impact on the soil and damage vegetation and fauna of the walking path. Compaction reduces aeration and oxygen circulation, which is detrimental to the ecosystem. Man-made erosion can be compounded by natural erosion which can cause permanent landscape damage, sometimes visible from miles away. In these situations, corrective measures may include, but are not limited to:

- Adding drainage channels to prevent water from flowing onto the trail;
- Sealing off the degraded sections and constructing parallel alternatives that take a less sensitive route;
- Construction of artificial or elevated trail surfaces.

Trail disaster on Schiehallion Mountain (Scotland)

This was found to be the case on the Schiehallion trail, which is used by 20,000 hikers each year. Intensive trampling combined with exposure to wind and rain has turned the main walkway into a muddy field spreading over 20 m wide in some places. In the year 2000, the Conservancy's John Muir Trust realigned the trail to a more sustainable route in order to allow nature to heal the damage done to the old trail.



Recreation ecology, that is, the environmental consequences of outdoor activities on wildlife, plants, and soil, has become an emerging field of scientific study over the past 60 years. The international literature on this topic is extensive and challenging to review in depth. In particular, the effects of trampling on vegetation and its recovery rate have been the subject of considerable research. Trampling is also the most visible impact that is caused directly by hikers. Some examples of this are listed below.



The study *"The assessment, monitoring and management of hiking trails: a case study from the Stirling Range National Park, Western Australia"* by Mende and Newsome (May 2006) states that no standard system for assessing and monitoring trail degradation has yet been implemented anywhere in the world. The study trialed an American method for assessing footpaths in an Australian national park, to gauge the methodology's suitability as an international assessment and reporting system. The method provided detailed trail profiles describing certain environmental variables, degradation and maintenance issues deducing that the tested system was effective on short trails with appropriate equipment and regular maintenance...



The study *"The impacts of trail infrastructure on vegetation and soils: Current literature and future directions"* by Ballantyne and Pickering (2015) in **Australia** builds on the popularity of more nature-based activities, such as hiking and mountain biking, highlighting the hundreds of thousands of kilometers of recreational trails around the world cutting across a range of landscapes. Using systematic quantitative literature review methodology, the study assesses the impacts of trails on vegetation and soils, highlighting what is known, but also highlighting major knowledge gaps. Of the 59 original research articles identified on this topic that have been published in English-language peer-reviewed academic journals, the majority were on research conducted in protected areas (71%), with few on developing countries (17%) and yet fewer on threatened ecosystems (14%). This research focuses on a few habitats and biodiversity hot spots, primarily in temperate woodlands, alpine meadows, and Mediterranean habitats, often in the United States (32%) or Australia (20%). Many have analyzed the reduction in vegetation cover, changes in plant species composition, trail widening, soil loss, and soil compaction. The authors urge further research in areas experiencing rapid growth in tourism and recreation activities.



The study *"Plant species variation across path ecotones in a variety of common vegetation types"* by Roovers, Barten and Hermy (2004) in **Belgium** evaluated the effects of prolonged recreational interference on vegetation structures. Research sites included two types of forest, one grassland and one heathland. The audit was conducted on different parts of the trail. Investigation confirmed that trampling was exerting multiple pressures on the vegetation.



The research study *"Landscape-ecological evaluation of touring path in Low Tatra National Park"* by Hudecova (2004) in **Slovakia** determined that one path had been heavily affected by heavy use resulting in a widened path, with some of the compacted area stripped of vegetation. The study suggests precautionary measures to minimize excessive damage.



The Lynn and Brown (2003) study *"Effects of recreational use impacts on hiking experiences in natural areas"* in **Canada** examined how trail erosion and degradation by users affected their enjoyment of the experiences in natural areas. With the most negative effects of litter and debris on trees and plants outweighing trail widening and mud buildup, this study found that trail erosion and degradation had the greatest impact on the enjoyment of natural areas. The information generated by this study is useful for appropriate planning, design, and management of natural areas to maintain ecological integrity and provide quality hiking experiences.



The U.S. Forest Service's study "Recreational trampling of vegetation: standard experimental procedures" was published by Cole and Bayfield (1993), who reported on standardized experimental procedures for the effects of traveler treading on vegetation and its recovery rate. A protocol based on extensive testing and discussion in the United States and the United Kingdom, which can be applied across a wide range of vegetation types, was developed to provide information on vegetation damage in response to short-term trampling and subsequent recovery over a one-year period.



The paper "An Assessment of Recreation Impacts in Alpine and Subalpine Areas of Grand Teton National Park: Preliminary Findings" by Monz and D'Antonio (2009) in **the United States** examined changes to resource conditions due to recreation use in Grand Teton National Park. The study focused on assessing off-trail areas and designated sites where visitor usage tends to have a rapid and undesirable impacts on resources. Preliminary results suggest that while resource change is significant in some locations, impacts tend to be spatially limited to areas surrounding the more heavily trampled popular destination sites. This work provides a baseline assessment for examining change over time and evaluating the effectiveness of visitor management actions.



"The Yosemite National Park Trampling Study" by Monz and D'Antonio (2013) in **the United States** illustrates the growth in interest in recreational activities and in the wild, particularly for hiking and camping. Coupled with the increase in visitation, these activities represent disturbance and human impact on the environmental conditions of parks, forests, and wilderness areas. Understanding the impacts and the tolerance levels of ecosystems used by humans are key elements of frameworks for ensuring the necessary park management capacity.



The research paper "Impacts of Hiking and Camping on Soils and Vegetation" by Cole (2004) in **the United States** provides a historical context for the development of recreational hiking literacy and the consequences for soil and vegetation. These analyses were conducted in environments characterized by quasi-natural conditions, low levels of development and of overcrowding. They found that from a soil and vegetation impact perspective, the differences between tourism and outdoor recreation (hiking, mountain biking, horse riding, Quad biking, 4-wheel driving, etc.) appear to be negligible. While some of the most dramatic environmental changes result from infrastructure development to support tourism, more diffuse impacts also result from the recreational activities in which tourists engage in. Hiking and camping, for example, can have profound ecological impacts. This is especially true in more remote areas protected by parkland and wilderness. Of the many environmental effects of hiking and camping, impacts on soil and vegetation were the most studied.



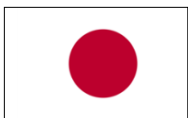
Hartley's (2000) "Thirty Year Monitoring of Subalpine Meadow Vegetation following a 1967 trampling experiment at Logan Pass, Glacier National Park, Montana" in **the United States** reports long-term monitoring on the effects of trampling on alpine habitat. Hartley states that the vegetation canopy took 19-25 years to recover when trampled 15 times per week for six weeks in 1967, compared to 25-30 years where it was trampled 50 times per week. It suggests that the long-term consequences of human trampling on dry grassland vegetation cannot be assessed from short-term observations.



The study "Assessment on and perception of visitors' environmental impacts of nature tourism: the case study of Zhangjiajie National Forest Park, **China**" by Deng, Qiang, Zhan, and Wakker (2003) examined the impacts of trampling on vegetation and soil as well as visitors' perceptions of these impacts in the Zhangjiajie National Forest Reserve, China. Trampling impacts on the two most heavily traveled trails were proportional to visitor passage in Zhangjiajie Stone Forest National Park. The Yellowstone Village Trail and the Gold Whip Stream Trail had the highest values in the soil impact index and the rate of damaged trees. Vegetation and soil around the Treasure Box for Celestial Books were most affected. However, visitors' perceptions of the impacts of walking satisfaction did not always match the actual physical deterioration. Factors such as visual susceptibility and social drivers could also affect visitors' judgments. Finally, this paper put forward strategies for improving park visitor management to influence the preservation of the park environment.



The study "Hiking trails and tourism impact assessment in protected area: Jiuzhaigou Biosphere Reserve, **China**" by Li, Ge and Liu (2005) found that the increase in visitors to protected areas has led to both increased economic benefits and adverse effects on the ecological environment. In protected areas, trails that connect visitors to the natural ecosystem account for most of the negative impacts. As a result, trails were selected as a target for assessment, with indicators of trampling problems, trail widening and expansion, and root exposure. Two indices, trail connectivity and circularity (looping) were selected to analyze spatial patterns of trail networks. For example, the results of the research showed that the frequency of occurrence of trampling problems was inversely correlated with the circularity and connectivity of the trail network. Compared to pristine trails, man-made features such as wood trails and paved trails were an effective solution.

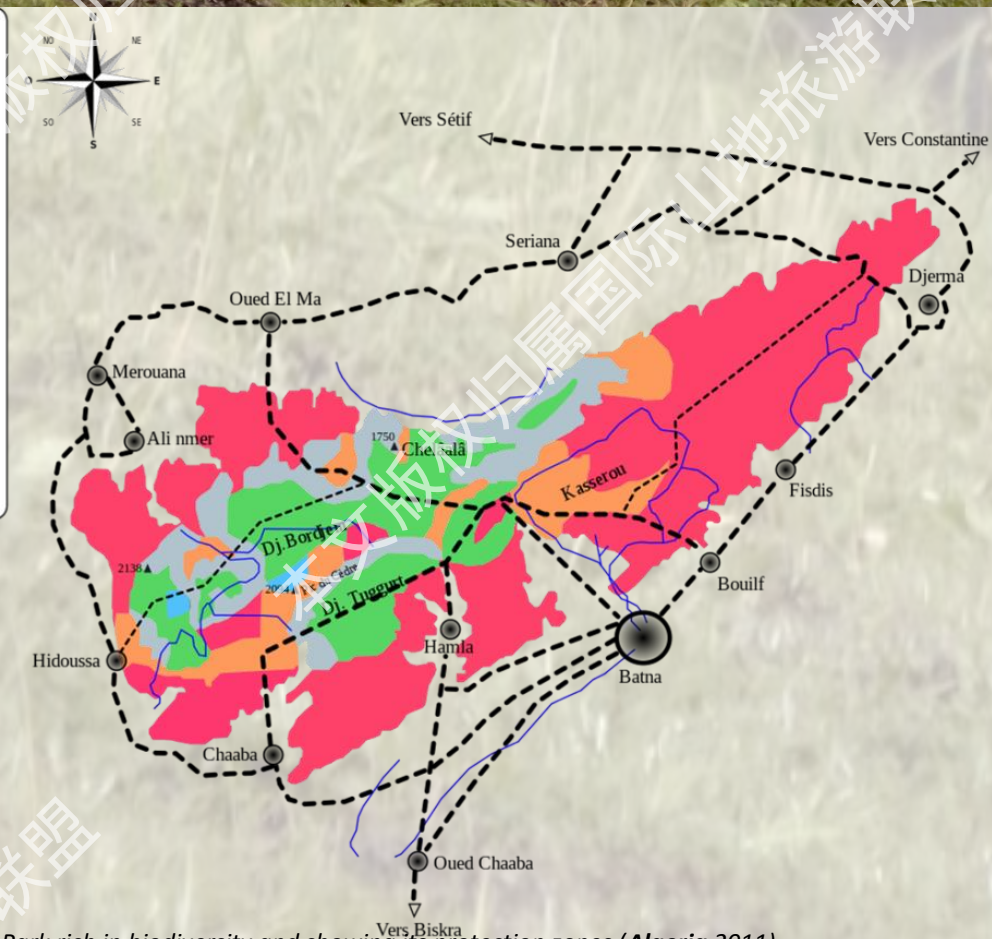
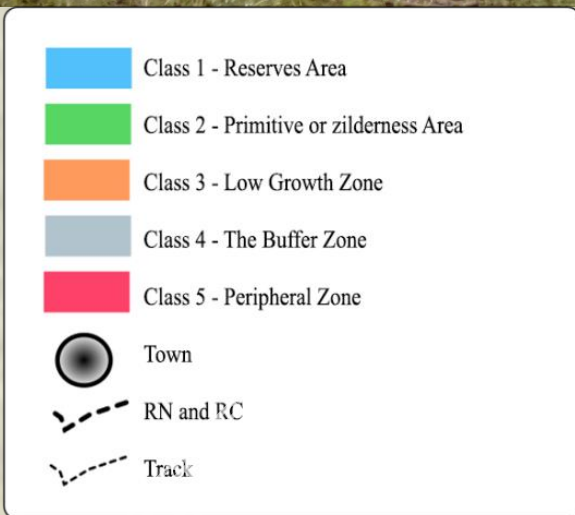


The investigation on "Erosion of mountain hiking trail over a seven-year period in Daisetsuzan National Park, Central Hokkaido, **Japan**" by Yoda and Watanabe (2000) looked at the factors influencing the erosion of mountain trails in Japan. Trails had deepened more in snow-covered vegetated areas (of shrubs or snow-covered vegetation in winter) than in bare ground areas beaten by the wind. The presence and timing of snowmelt runoff appeared to be important for differential erosion, and trail slope also contributed to erosion. The authors report that the installation of ropes beside the trails helped mitigate erosion by keeping hikers on the trail.





©Riyan Hidayat by Pixabay: a crowded hiking trail of a mountain meadow (Indonesia)



©Reda Kerbouche: Map of the Belezma National Park rich in biodiversity and showing its protection zones (Algeria 2011)

12.2 - The limits of the reception capacities of a natural site and its trails

By definition, the stability of a natural site is fragile. An imbalance, however small, can lead to a cascade of repercussions, and potentially cause complete or even permanent alteration of the site's ecosystem. Does this make "access prohibited" become inevitable? Should nature be musealized, made it into a distant fixed picture that is nothing but a landscape or a spectacle? What is certain is that humans are part of nature. It is therefore important for us to be able to visit it in order to refocus, educate ourselves, become aware and maintain our connection with it... The question is: on what condition can we do so?

It is impossible to predict a single rule of accessibility, applicable to the environment in general. This rule is very much site-specific. It must be determined according to a certain number of factors, including: the state of nature of the site (primitive or more or less anthropized nature), its level of fragility, the biodiversity to be protected, the level of natural or anthropic degradation, the level of tourist frequentation and behaviors, etc.

Whatever the project, it is fundamental to know one's geographical area, its biodiversity and its characteristics, in order to define the limits in terms of the area to be visited, the development to be carried out, and the number of visitors to be considered. The key is to understand the balance that can be struck so as not to disrupt the natural order of the environment.

In any case, "moderation" is a golden rule and the study of the natural environment, with a complete inventory of the territory and existing trails (refer to P2 - Chapter 2), will always contribute to the knowledge of the environmental stakes and the sustainability of a project.

The following are the principal findings of the environmental study on fauna, flora and soils, as well as general recommendations for the development of trails which respect the local environment.

Wildlife is often fearful, shy, inconspicuous, and seldom seen. They are afraid of the two-legged human presence, and they certainly have their reasons for it. If episodic promiscuity is conducted in a peaceful manner and is not felt to be an interference in the wild habitat, these animals will in part become accustomed to human presence. However, certain areas are more sensitive and consequently important for its development than others: it is necessary to be able to define them.

Particular sensitive zones

Sensitive areas may be in height. For example, a couple of eagles may be nesting on a rocky cliff face. Passing a trail at the foot of the cliff, even if the couple is nesting 150m above the ground or in lineal distance, will cause a definite disruption. Indeed, the noise will rise and echo on the wall and the hikers will be disruptive for the eagles living on the cliff. The trail should not be routed in the vicinity of eagle nests.



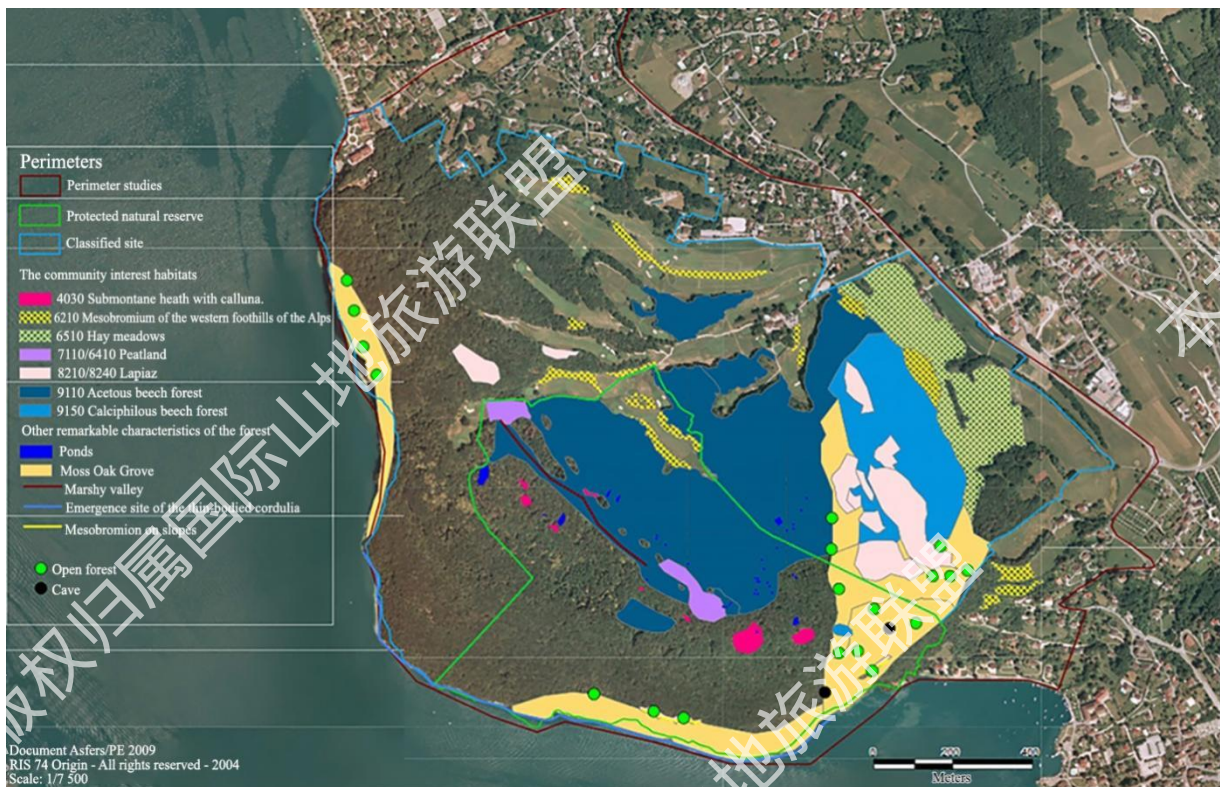
In order not to search for all the sensitive areas for the species present (countless animal and plant species often use the same space), it is necessary to first find the so-called "priority" species: those that will be the most vulnerable to the pressures imposed by a project. Endemic species are more important to consider than cosmopolitan or ubiquitous species because they are less resilient to external disturbances. Non-native species introduced during transitions from one ecosystem to another (a phenomenon amplified by the internationalization of human activities and the massive destruction of wild habitats) must also be detected, as they are potentially invasive and capable of transforming landscapes (in an ecological sense).

The species evaluated as priorities become the representatives of the environment and they are often the ones that use the most space for their life, subsistence, and well-being. These species therefore encompass the issues of the majority of species present. It is then necessary to focus on them to organize the observation, surveillance, and monitoring of their natural habitat, in order to know their lifestyles, their breeding, nesting, and hunting/regulation areas according to the region, and more...

If all areas of the project area are investigated at the animals, plants, and soil levels, especially those sensitive to the natural environment, they must be mapped. A peripheral "buffer" corridor must then be defined to prevent any trails or hikers from entering the sensitive zones. Zoning is fundamental to the planning, development and management of the site and trails. The various land and water areas will be zoned according to the degree of protection and development required.

Once these sensitive areas and buffer zones have been delineated, sometimes the trail routes may not be able to avoid some of them (the valley is too narrow, the area between lakes and cliffs, etc.). It is thus possible to define periods of closure for the use of this trail. The breeding areas of the species are in fact considered sensitive only for part of a year. The recommended strategies must be accompanied by information for the public, so that they understand and adhere to localized and episodic bans, and to direct them to other open trail options (according to the cultures of certain countries, a ban is not always respected by hikers if it is not explained and understood).

The following map shows an example of sensitive area zones.



(Source : Roc du Chère National Nature Reserve, in "Plan de Gestion 2010-2019")

STUDY OF THE FLORA

Flora is arguably the most sensitive element of natural areas. While animals can move when disturbed, plants are anchored in their place. It is therefore important to carefully study the flora of the natural environment that a trail project will target so that the development avoids areas where rare species and/or species that are essential to the life of animals are present. The trampling of these plant species, even by a single person, can be put their survival at risk.

Using the same analytical approach as for wildlife, it is necessary to study and draw the map of protected areas.

To this end, there are two methods worth considering:

- Either, same as for animal sensitive areas, a buffer ring can be created around this vegetal sensitive area, prohibiting any passage of nearby trails. Adequate facilities (signage, for example) should prevent hikers from leaving the trail area and trampling off-trail.
- Either the trail pass along the sensitive area with specific facilities and equipments (e.g., trail on stilts) and reinforced markers that inform and educate visitors, while keeping sensitive plant species intact. This strategy, which offers hikers the possibility of seeing and discovering this beauty or this specificity of nature, is close to localized "museification", which can become an attraction for a tourist site.

STUDY OF THE SOIL

Once fauna and flora areas are identified and mapped, the most common risk at hiking sites is soil erosion, which induces a decrease in space for this wildlife living locally. Even if the trail does not encroach on a sensitive area, the erosion linked to repetitive trampling on the walking area of a trail reduces the surface of the natural wild habitat and increases the pressure that can be felt by the fauna.

To study soils, it is important to distinguish four vulnerable categories:



Wetlands:

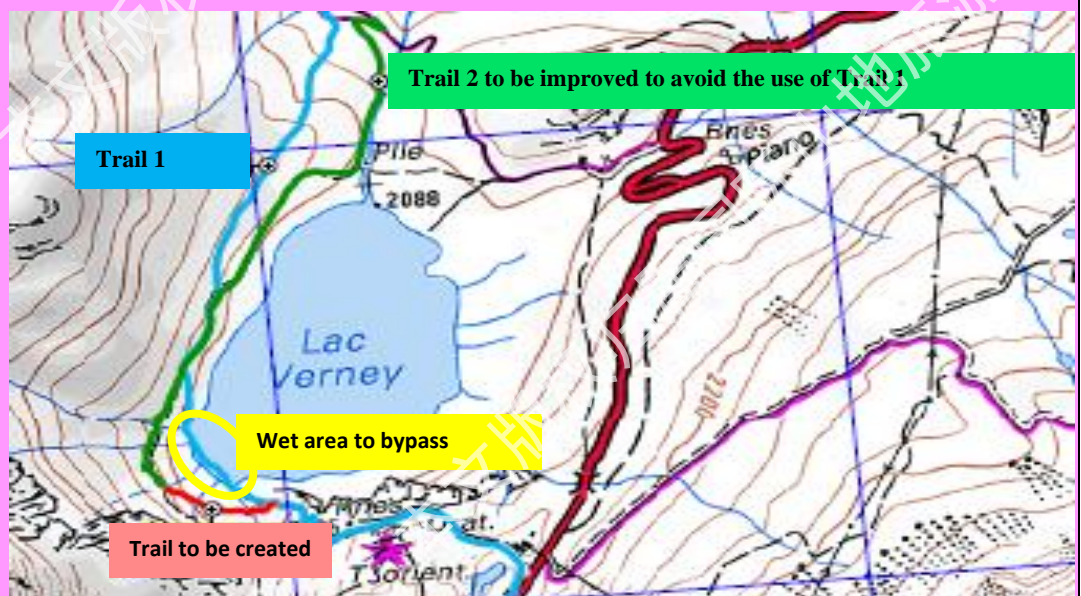
Wetlands are the areas with the greatest plant diversity, and they are hyper-sensitive to human trampling. Therefore, avoiding these areas is necessary, even for low traffic trails. The trampling (even limited to a few passages of hikers per day) compacts and modifies the terrain to a significant degree. This settlement compacts the earth and creates small underground dams preventing water from circulating in the soil. Such a path can dry up parts of the wetland and negatively affect the ecosystem. It is therefore crucial not to develop these areas and for hikers to pass around either close with the necessary protections, or at a greater distance. A natural path in a wetland is also often uncomfortable for hikers wading in soil between water and land.

EXAMPLE OF BYPASSING A SENSITIVE WET ZONE

THE TOUR DU MONT BLANC TRAIL IN THE MUNICIPALITY OF LA THUILE (ITALY)

This trail passes through the wetland of Lake Verney (the blue trail in the area circled in yellow). The increase in walkers on this famous hiking trip led to the serious excavation of the trail and the degradation of the area.

A new section of trail was built in 2017, on a slope above the wetland as a bypass. At the same time, the decision was taken to improve the best of the existing trails (combination of blue, red and green sections) offering both the proximity to the lake and environmental protection by avoiding the yellow zone. The goal was for passing hikers to select this route and abandon other trails to let them regenerate.



If the wetland cannot be bypassed, it is possible to lay footbridges, or to make a decking of the path with a walking area made of wooden planks, which helps to keep the water circulation intact. (Below is an example in **Sweden**.)



Muddy terrain (for all or part of the year):

These areas are often grassy humid areas that easily become muddy during rainfall. It is less about wetlands with their own flora and fauna than cultivated fields and other semi-domesticated natural spaces such as an agricultural one. Muddy terrain is less sensitive from a purely faunistic and floristic point of view, but it is very uncomfortable for hikers who skirt it, thus widening the walking area which can sometimes reach several tens of meters wide. An area of agricultural exploitation, breeding, and plant-eaters can thus be significantly reduced. These plagues on the landscape are also very unsightly (refer to P1 - Sub-chapter 12).

These bypasses of muddy areas by hikers who want to keep their feet dry generate new trampling in outer grassy areas which in turn become muddy, which subsequent hikers will bypass further out creating a viscous cycle. At the end of a rainy day, the traffic width of a 60cm wide path can be multiplied by 5 according to the attendance rate. This also increases the risk of trampling on sensitive species.



A before and after shot of the passage of hikers in a muddy area (meadow of Alpage de la Sausse - **France**)

In these areas, it will then be necessary to pave the path, i.e., to lift the path "out of the water", either with a cover of pebbles and gravel, or with semi-buried boulders. Decking (wooden path above the ground or semi-buried) can also be considered. It is also possible to cover the path with shavings or sawdust which will allow water to seep towards the ground and keep hikers' feet dry (refer to P2 - Chapter 6).



Meadows in the Mountain

Just as the field becomes muddy, mountain meadows are ecosystems that take a long time to form. It can degrade rapidly and take time to regenerate.

On poorly maintained trails, the digging of the walking area can turn into a real torrent channeling bed of rainwater. Water is a major player in erosion, with natural erosion adding on to anthropogenic erosion. A sloping path in cant, uncomfortable to walk, pushes hikers to walk on the high edge of the trail where there is grass. They will thus trample and generate more and more of the path widening, creating a system of "multi-paths". This phenomenon also occurs when the path is a switchback trail and the hikers cut the turns (refer to P1 - Chapter 6 and P2 - Chapter 6)



Multi-path linked to the wandering hikers at Col de la Croix du Bonhomme, Rhône-Alpes region (France)

Under different circumstances, it is vital to prevent water from circulating on the trail. It is necessary to create rainwater drainage and evacuation chutes. Access to parallel trails must be restricted, either with markings to educate and guide hikers, or using barriers of naturally occurring materials (tree branch, heaps of stones, etc.).



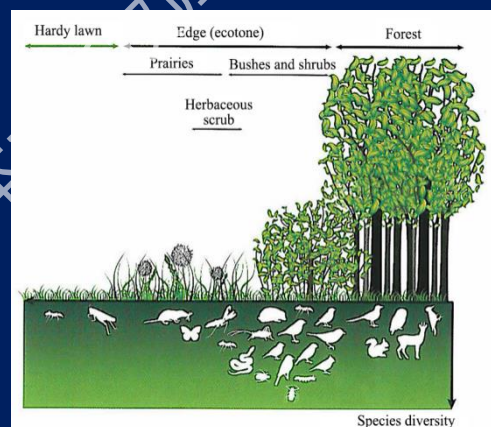
Geological layers

The same problem as that described for mountain pasture trails is found on land with geological layers. Some rocks by themselves are soft and moldable (gypsum for example), and therefore easily crumbles with repetitive trampling. Here, there is little solution, and the best way is to, as much as possible, avoid letting trails run through these loose rocky areas.

If a route must pass through an area of this nature, the walking area must avoid steep slopes, follow a slight gradient, and maintain a lateral inclination of this walking area. Water drainage chutes should also be installed to facilitate the evacuation of the rainwater off the trail (refer to P2 - Chapter 6). Informative signage can encourage hikers not to walk off the path.

The preservation of transition zones

Ecotones are ecological transition zones between two ecosystems (e.g., the boundary between forest and grassland). They are generally very rich in biodiversity because they shelter species specific to this transitional environment but also species belonging to each of the ecosystems bordering it. Paths can cross these areas, better widthwise rather than following them lengthwise to minimize clearing and trampling of the trail space.

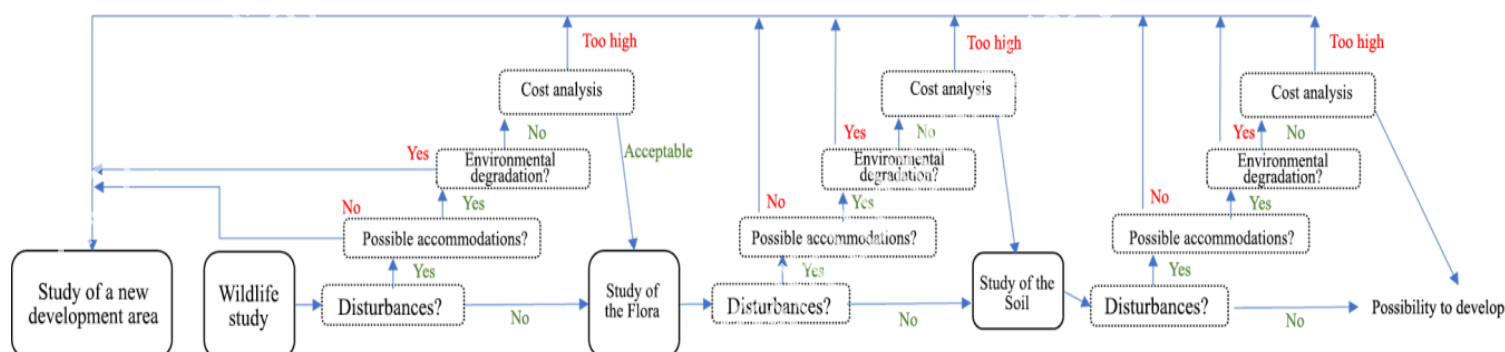


THE TRIPTYCH OF FAUNA, FLORA, SOILS

There is no standard grid to determine the number of tourists and hikers a natural site can receive without being damaged, depending on its area and sensitivity level. This “load capacity” is specific to each site and must be carefully analyzed.

The fauna-flora-soil triptych is essential to conduct this analysis. The process is explained by the following DIAGRAM: Step 1 - analyze fauna, flora, soils on the site; Step 2 - define the issues present; Step 3 - find solutions and analyze their associated cost. From this, two options arise:

- **Where protection and cost solution are possible** **Continue**
- **Where protection and/or cost solution are not possible ..** **think the project elsewhere**



Thanks to a rigorously adaptive and dimensioned trail infrastructure, all sites, even sensitive ones, can be approached and appreciated by hikers.

A feasibility study of the considered trails is paramount for good management of a natural site intended to be open to hiking. Once the site study has revealed the site’s strengths and weaknesses and has made it possible to clearly delineate the areas of sensitivity to be preserved and not touched, the project must be sized. You have to be able to answer many questions: Who is the target audience? What is the expected attendance? How should it be arranged? (refer to P2 - Chapters 3, 4 and 5). The options explained above of whether or not to approach sensitive areas will necessarily depend on these new criteria.

The flow / sensitive area equation must be systematically based on the direct analysis of the site. This equation can be reasonably evaluated as shown in the **TABLE** below. These figures are indicative and are not absolute (the numbers that are not shown may not be in the line with the above site analysis)

Average number of passages per day	Recommendations
Greater than 2,000	The trail infrastructure should be as far as possible from sensitive zones.
Between 500 and 1,000	The trail can be taken closer in with protective equipments and information setups (to prevent trail users from wandering off the paths).
Less than 100	The option of going through sensitive areas is conceivable but with particular constraints, to be respected both by the creator and the users of the trail.

THE FIVE FACTORS ON THE CAPACITY OF A TRAIL FOR THE MAXIMUM NUMBER OF HIKERS WITHOUT BEING DAMAGED

The capacity of a trail and its trail type will depend on five main factors:

- The trail terrain;
- Its use;
- Its frequency of use;
- Its level of difficulty;
- The environmental factors.

The walking area: a predominantly affected zone

This is the path of a hiker's travel space. It is estimated that one person walking alone needs a width of 40-50cm, to which 10-15cm should be added if traveling with trekking poles. This data is important for the planning of trail dimensions.



The physical capacity of the trail terrain

As described in detail in the previous paragraph, the physical capacity of the path to receive people is a factor to be considered. With the evolution and erosion of the trail over time, the walking area can change dramatically and eventually no longer attract the desired practitioners. This is especially true for easy trails intended for walks by the general public. The appearance of roots on a forest trail, for example, can make walking more unstable for seniors, or even prevent the passage of strollers or wheelchairs. All these small obstacles do not fall into a category of environmental vulnerability, nor will they hinder seasoned hikers, but they will affect the quality of the trail.

Respect for the basic technical of trail design (layout in the right places, water drainage, choice of soil resistant from trampling, etc.), and provide regular and quality maintenance (monitoring their condition, pruning and plant cleaning on the edges of the path and at human height, replacement of defective steps, so forth) will make a path durable and accessible to the targeted users (refer to P2 - Chapter 6).



Profile of trail users

The type of trail also depends on its use (refer to P1 - Chapter 9). Is this a trail for families or more suited for athletes? Does it connect to a mountain shelter or cross an altitude pass? In fact, a path intended for families must have the smoothest possible travel area, or even be

covered with a coating of sort, with a low slope and specific arrangements to allow the public to take breaks and enjoy the landscape. A sports trail will have to keep its wilder character with a movement area that can be more natural and challenging.

It is also important to know if this trail is a two-way track (go and back) or if it is used only one way. We can estimate that for a path taken in both directions, its width must be multiplied by two. This will allow walkers to pass each other, without trampling the edges of the trails. In the case of a one-way trail, the width may be that of the space required for a hiker (between 40 and 50 cm). In the case of a two-way trail, the width should be about one meter.



The trail usage

In order to determine the appropriate design and width of a trail, it is important to know the planned or actual traffic. In the case of a low-traffic trail, with few crossings per day, it is unlikely that there will be many cases where faster hikers overtake slower ones. The same applies to the crossing of two hikers, so the width of the trail should be designed for a single person to pass, that is 50 cm wide.

Conversely, a busy trail is likely to have more novice hikers, often groups of people who like to walk and talk among themselves. It will therefore be necessary to increase the width of the trail so that two or three people can walk side by side. In any case, it is accepted that a pathway should not exceed 1.5 m in width, beyond which it will be considered a road.

Modification of path typology

The modernization of a ski cable car can significantly change the flow of people transported, thus changing the number of trail users around the arrival station. These trails will then have to be re-adapted to this increase of attendance.

This was the case in the Chamonix Valley when the Flégère cable car was replaced, increasing the transport from 450 individuals per hour to 2,000 individuals per hour (displayed as pers/hr). At the same time, the main trail (leading to Lac Blanc/White Lake) had to be modified for better accessibility and for hikers at the beginner level. The path had to be closed to the public for more than a year in order to double its width and lay wooden decking on sensitive soil.

(Source: www.cc-valleedechamonixmontblanc.fr)

Added to this are the disparities in the profiles of the users of the trail and the site under consideration. A slow hiker (novice, elderly, family, observers) and a fast hiker (sportsman, speed-hiker, trail runner) will potentially interfere with each other. If this interference is occasional (on a lightly traveled trail), it will not be a problem. On a well-traveled trail, the repetition of such a situation will create "user conflicts" that may diminish the trail experience for both parties. It will be up to the manager to establish rules of use where necessary.

TABLE: Trail width by traffic density (indicative data)

Attendance in persons/hr	Width in centimeters	
	One-way	Two-way
Greater than 2,500	150	> 150
Between 1,250 and 2,500	120	150
Between 500 and 1,250	80	120
Between 100 and 500	50	50
Less than 100	< 40	40

(Source: Jules Pijourlet, *environmental expert*)



The environment

As shown above, the environment will directly constrain the pathway layout and the work of the designer(s). On the other hand, the environment that the trail is designed to enhance can give the hike a particular value in terms of fauna, flora, geological aspects. Trails are an excellent way to get in touch with nature and to explore it.

A trail in nature must be uncluttered to avoid crowds and concentrations of people. On occasion, a well-traveled trail with a comfortable width may cross narrow gaps (footbridge, wetland crossing, narrow gorge, etc.) that can cause "traffic jams" of hikers like congested roadways. Frequent traffic jams can have a local impact on the environment (littering, trampling, attempts to bypass, and the like). Such trails could take on a one-way "loop" route.



Trail difficulty (refer to P1 - Chapter 9)

The impact of trail difficulty might be extremely limited, but it must be said that the more the trail has an elevation gain, the more the disparity in the level of the hikers will be felt. In all cases, it is understood that a trail open to all must not exceed a 15% slope, and for a so-called sport trail, this slope must not exceed 30%. Further steepening of the slope requires an equipment such a stair or the creation of a switchback trail on the slope. If possible, slightly increasing the width of steep trails will let hikers pass one another without disrupting their progress (refer to P2 - Chapter 6).

DESIGN STAGE OF TRAILS IN NATURAL AREAS

After considering and resolving all of these issues, including fauna, flora, soils, sensitive areas, trail types, user profiles, and attendance, the proposed trails can be plotted on the general map of the natural site. This topic of trail design, planning, creation and management is covered in Part 2 of this study.

The typical diagram of a trail system is similar to that of a tree. Initially, common paths are formed in the trunk, which were wide and strong, with good surfacing for a walking area that can withstand heavy use. As you move away from the starting point, the secondary and tertiary trails leave the trunk and enter the site leading to a number of different places of interest. As traffic decreases per trail due to this diffusion, the trails can become narrower, like the branches of a tree leading hikers to their walking destinations.

Thus, in mountainous areas, the more spacious main trails are often at the bottom of main valleys, while the narrower secondary and tertiary trails are up the slopes and into higher and smaller valleys. The two types of trails, which are wide and frequently used, and the others, which are narrow and not frequently used, have very different impacts on their natural environment.

In the flatlands, where trails often connect a cluster of inhabited areas. They become entangled, intersecting, and overlapping, which usually does not conform to the logic of trees.

FIGURE below: The proportionate size of "tree" trails



(Source: Jules Pijourlet, environmental expert)

Ecological Grading of Trails: A General Principle

Grade	Characteristics	Effect
1	Trail does not pose an environmental risk: only moderate use, non-sensitive environment, etc.	No particular problem
2	Trail with high traffic in a non-sensitive or low-sensitive zone.	Special arrangements to protect the walking area or to channel hikers may be necessary, especially if the ground is vulnerable.
3	Moderately used trail in a sensitive or hypersensitive zone.	Protective measures recommended, reinforced signposting, surveillance, and monitoring of the evolution of these areas are necessary.
4	Hypersensitive area with heavy traffic.	Avoid crossing the area and proceed around it. If bypassing is not possible, provide a pathway to avoid trampling the ground. In both cases, reinforced signposts are necessary.

(Source: Jules Pijournet)

Official categories of protected areas in the world according to the IUCN:

The International Union for Conservation of Nature has defined categories of these protected areas:

Type	Name	Characteristics	Example
Ia	Protected natural reserve	Limit human presence for scientific or resource protection purposes	Swiss National Park, Ecological reserves in Quebec
Ib	Wilderness Area	Limit human presence for scientific or resource protection purposes	Yosemite National Park, USA
II	National Parks	Protect the ecosystem for recreational purposes	French National Parks
III	Natural Landmark	Preserve site-specific natural attractions and elements.	Unique natural area of Los Estoraques, Colombia
IV	Habitat or species management area	Human management for conservation purposes	Popenguin Nature Reserve, Senegal
V	Protected landscapes or marine areas	Conserving landscapes for recreational purposes	Wuyi Shan, China and the Regional Parks in France
VI	Managed natural resource protected area	Sustainably managing ecosystems for conservation and sustainable use	Alonissos National Marine Park, Greece

(Source: "Guidelines for Protected Area Management Categories, IUCN, 1994)





© CA - Yosemite Climbing Rangers and the Yosemite Climbing Association restore a trail to minimize erosion (United States 2016)



©Finmiki by Pixabay: Trail through a wetland (Finland)

12.3 - The eco-responsible commitments of the trail manager

Commitments related to respect for the natural, cultural and human environment must be implemented by all stakeholders in trail development: public authorities, designers, contractors, managers, promoters, partners and relevant service providers, clubs, tour operators and trail users. This sub-chapter addresses the manager's code of conduct, he must follow. The manager must also encourage all parties involved to adhere to these instructions.

THE COMMITMENTS OF A TRAIL MANAGER

- Avoid any areas of ecological vulnerability that cannot be completely protected;
- Import as little man-made infrastructure as possible and create a network of narrow trails requiring as little excavation work as possible;
- Do not remove trees and steer clear of protected or emblematic species;
- Identify and maintain effective trail markers;
- Ensure that all trails are maintained on a regular basis;
- Define the target users for each trail;
- Inform and educate the users on environmental issues;
- Think beyond the sensitive natural area;
- Restore, rehabilitate and protect sites that are at risk of being degraded;
- Establish a system to regulate visitation if it approaches the maximum capacity for visitors and hikers;
- Close or reroute trail sections during breeding and calving seasons of wild animals within the hiking route system;
- Restrict use to a moderate level so that it is sustainable:
 - o Keep to measured trail traffic;
 - o Disperse traffic flow across all trails;
 - o Avoid advertising if word of mouth among users is sufficient;
 - o By moderating the commercial approach (generally unlimited, inequitable and impactful) of access to nature (the economic profitability has to be made on related services rather than on access fees);
 - o By having a participatory model with the community and shared benefits;
 - o Through regulatory enforcement.

DEFINITION OF THESE COMMITMENTS



Avoid all areas of ecological vulnerability:

If the study of the natural site is essential to choose the passage areas of the trails (see the previous sub-chapter), the manager will also have to monitor the impact of the activity and the condition of the trails in order to analyze any changes, adapt the routes, and measure the consequences of the developments over a period of time.

Importing as little artificial infrastructure as possible, using existing trails as much as possible, and creating a network of trails that require as little excavation work as possible;

It is recommended that paths with a tread surface be created on suitable natural soil, away from sensitive areas, following the relief of the land without having to dig it, by using local materials (stones, gravel, dead trees, etc.) if necessary. Foreign materials (treated wood, metal and especially artificial coatings such as cement and other such materials) should be avoided because, in addition to their negative impact on the environment, they are part of a global pollution problem that has become a real challenge for the planet.



Do not cut down trees. The principle is to create the smallest comfortable travel space for one person on the hike: Width 50 to 80 cm and a height of 2.5 m. To protect local or emblematic vegetation (flora, trees) from being disturbed (see local regulations), it is best to bypass them. Only scrubs and trunks of a certain size (maximum 10 cm diameter) may be cut and pruned. The trail should be laid out as much as possible without intervention of logging and digging.



Identify and maintain effective trail markers: Trail markers are used as much to indicate the path, to give advice and information, to secure hikers, to protect the environment. It is the most visible element of trail management for the users, that is an element that they immerse themselves in and that influences their experience of the trail. Designing, planning, mapping, implementing and maintaining appropriate trail markings fulfills many of the trail user's and the environment's needs (refer to P2 - Chapter 8).



Ensure that all trails are maintained on a regular basis: Maintain trails in a state of integrity by promoting water drainage, bracing them with low walls or other systems to prevent collapse, and maintaining fences and barriers constructed of natural materials to channel hikers, etc. This will encourage users to stay within the walking area and prevent unauthorized use of unopened trails.



Define the target users for each trail: Offer trails adapted to the target audience to keep them on their own path without trampling on the surrounding natural environment. Do not send families and senior citizens on steep trails and properly size the trail according to the expected traffic, etc. (refer to P1 - Chapter 9).



Inform and educate the public about ecological responsibility:

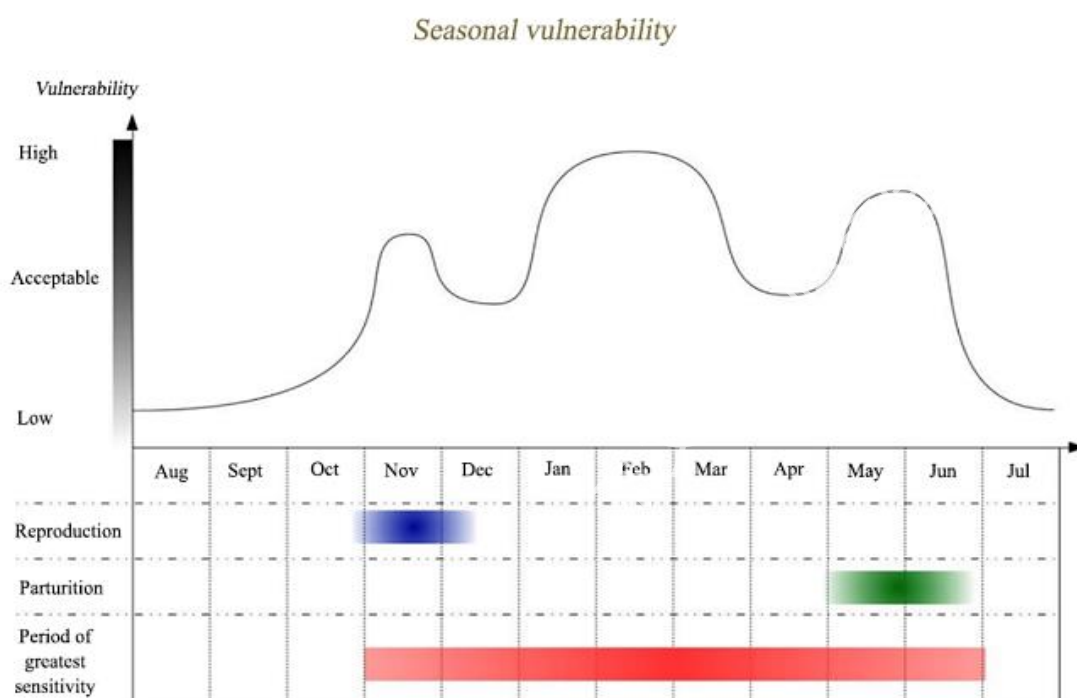
- Use the trail facilities, particularly the general information panel at the trail entrance, as well as promotional tools such as websites (refer to P2 - Chapters 6, 8, 9), to educate users about good behavior and remind them of the regulations governing eco-responsibility;

- Organize training for hikers, schoolchildren, and young people on how-to live-in harmony with nature;
- Involve the partners of the related services to spread the information (tourist offices, guides, hoteliers, shopkeepers, tour-operators, etc.);
- Organize an annual outing with journalists to showcase your trails and promote your sustainable, equitable and community-based efforts and management.

Think beyond the sensitive natural area and the perimeter of the trail. The overall route of the hiker is to be considered. How will they get there (car, public transport, cable car, etc.)? Which way will they travel (a trail network usually has several access points)? Is there adequate infrastructure to accommodate the visitors (parking, train station, gondola)? Is there adequate space for the entrance and reception areas? Have they incorporated the right environmental awareness information?

Restore and rehabilitate degraded sites. Once established, choices may be inappropriate, or natural events (e.g., rockslides) may render a trail impassable. Closure of the trail may become unavoidable. In these cases, it is important to clean up the site of any deteriorating equipment that has been imported, and to let nature heal until the trail can be rehabilitated without further human use. This healing may take years and a temporary detour to another trail farther away may be necessary.

Temporarily close or reroute sections of trail when animals should not be disturbed. This requires the manager to be familiar with the habitat of species that share the site with hikers. What are these wild animals? Which is their domain? Who are the most vulnerable? When do they mate, give birth, lay eggs and nest? Due the human activity, these have become fewer in numbers and their natural habitats are becoming more restricted, therefore it is essential that they are protected. They are also the ones bringing permanent life to the mountain. Therefore, hiking routes must be adapted according to areas and periods where they should not be disturbed.





Restrict the use to a moderate level to ensure sustainability:

- By measuring reasonable traffic;
- By distributing the flow of visitors over the mapped network of trails;
- By making no promotion or advertising if "word of mouth" among users is sufficient for moderate development;
- By moderating the commercial approach (generally unlimited, inequitable and impactful) of access to nature (the economic profitability has to be made on related services rather than on access fees);
- By establishing a participatory model with the community and shared benefits;
- By monitoring under the responsibility of the Government.



Establish a system to regulate visitor numbers if they are approaching the maximum capacity for visitors and hikers (refer to Chapters 5 and 8 - P1)

Managers have several ways to limit the access to sites:

- Adapt the flow to the capacity of the accommodations located near the trail;
- Introduce a hiking permit (for free or at very low cost) to limit groups (National Parks in the U.S., Japan, etc.);
- Restore hiking to its original scope and difficulty and limit it to users who are well-prepared. This may involve, for example, deconstructing a cable car and leaving only the footpaths to access the site (probably the best and most equitable solution);
- Imposing a commercial toll or high entry fees (probably the least ethical solution because it discriminates by money). This solution does not prevent mass visitation and it diverts a natural resource which is a common good.

Remove infrastructure to leave nature without facilities: a strategy for natural flow regulation



Val Ferret (Italy)

This popular tourist site, which is free for hikers, is located at the bottom of the Ferret valley, accessible by a driveway that ends up at a dead end.

At the end of the road, visitors park their vehicles in a parking lot with limited space. When the parking lot is full, the site manager will close the entrance to the driveway, forcing visitors to leave their vehicles down the road and walk 3 km on the road to reach the site and the trailheads. This strategy naturally reduces the volume of tourists.



Mont Blanc (France)

The free glacier trail of Mont Blanc summit has been so successful in the last few years (with 25,000 hikers and mountaineers per year) that in some parts of the site and during certain seasons, the garbage and the remains of bivouacs have become more and more visible.

In view of the growing number of harmful behaviors, both for the environment and for safety, a new regulation on access was imposed in 2019. A "white brigade" has been set up with patrol guides authorized to impose penalties. Bivouacking has been forbidden under penalty of fines and a political will to regulate has been organized around two options:

- Remove the lodging huts that line the ascent route to give back the initial and natural challenge of the summit ascent;
- Limit the daily number of visitors to the accommodation capacity of these huts: this option was adopted.

EXAMPLE OF ACTIVE TOURISM MANAGEMENT IN THE NATURE OF A HIGHLY SENSITIVE SITE



THE CASE STUDY OF MULTI-SECTORAL MANAGEMENT OF THE GALAPAGOS ARCHIPELAGO (ECUADOR)

Made up of 138,000 km² where 7,800 km² island, 127 islands, islets and rocks of which 19 are quite large (four are uninhabited). 97% of the total land area is a national park since 1959.

These islands, discovered in 1535 and inhabited by unique indigenous biodiversity, inspired Charles Darwin's theory in the 19th century. They remain a "living museum and showcase of evolution" and an invaluable laboratory for academic research in the life and earth sciences.

Since its colonization by humans, other non-native species (pigs, goats, rats, parasitic flies, raspberries, etc.), which consume the space and resources necessary for the original biodiversity have been introduced to the area. A program to remove pigs and goats was undertaken in 1970.

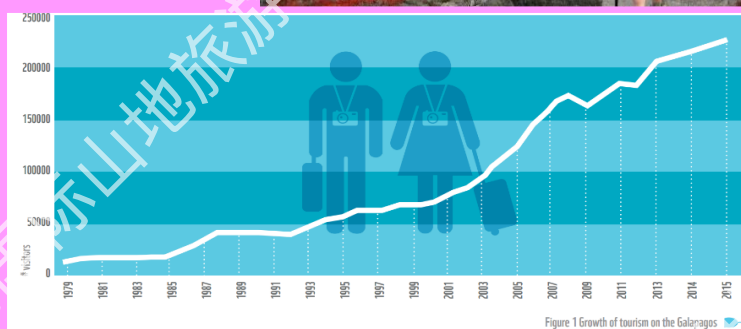
The start of organized tourism here dates to the 1960s. The number of tourists increased from 4,500 in 1970 to 250,000 in 2019 before Covid, which is seven times the number of residents (35,000 people). The population residing in the archipelago is growing with the increase of the tourism industry, which is also the engine of local socio-economic development and supports a wide range of activities that provide many jobs: hotels, restaurants, guides, cruise services (80 boats and yachts that are the only way to get between islands). This growth puts pressure on this limited territory with limited freshwater resources, and accommodation, and health care resources, etc.

Hiking is the only land-based way to visit the fauna, flora and preserved landscapes. The diversity is wide, ranging from quiet walks on the beaches and rocky coasts to strenuous trekking in the interior of the volcanic mountainous islands. Most of them are natural trails. Trails are mapped, marked, and maintained by the Park Department (known as the GNPD). Some hikes are demanding with the longest being 26 km at an altitude of more than 1,500 m.

The park has no official limit on the number of visitors. However, the GNPD management system handles the flow of tourists into the protected area, their accommodation on board boats, and docking supervised by qualified guides. Tours are planned and approved by the park. The number of visitors is regulated on each island trail within a specific time window, thus avoiding overcrowding.

Tourists-explorers are required to strictly abide by the strict rules of the park. The official and mandatory GNPD guides are available to assist in enforcing these rules. These guides, along with the boat captains, are the ultimate authorities and enforcers of the regulations. They may prohibit a tourist from disembarking on an island if they feel that the behavior could pose a problem to nature or safety. Groups are limited to 16 people per guide. Each guide has undergone rigorous training in leading a group and educating others about eco-responsibility. The main guidelines are as follows:

- Travel only with tour operators and/or authorized watercraft;
- Stay on the marked trails and adhere to the signs. Leave no evidence of trespassing behind;



- Always stay at least 2 m away from all animals and do not feed them (wildlife is not afraid of humans);
- Do not use flashlights to take pictures of animals;
- Do not set camp, except in the small, dedicated areas and with a valid permit (needs to be applied for at least 48 hours in advance);
- Do not bring food, animals, or plants to the islands. Do not buy objects made of coral, shells, lava stones, animal parts, wood, and native plants, etc. (Inspections are conducted upon arrival and departure from the islands);
- Remove all garbage and dispose of or recycle it in populated areas or on the accommodation boat;
- No smoking, fires, and the use of motorized water, land, or air recreation are not allowed;
- Fishing is only permissible on authorized boats;

Tour operators and boats have implemented their own waste management and recycling policy, no longer use plastic bottles or non-biodegradable products, give preference to local suppliers for food, and reduce carbon emissions by using solar panels, etc.

The Galapagos islands are, however, precarious in nature and continually face inextricably linked environmental and anthropogenic threats, particularly (according to the International Union for Conservation of Nature) global warming, tourism, invasive species and overfishing. The entire chain of stakeholders navigates at a complex and delicate intersection of protection, economic activity, and local development.

On most of the sixty or so sites visited on the islands, damage of geological features has been found: path erosion linked to trampling. One island had to be closed due to trail wear caused by foot traffic.

Research is continually being conducted on the extent of the actual pressure of human presence. GNP, Charles Darwin Research Station, Galapagos Conservation Trust, WWF, and other organizations continue to make progress in advancing the understanding of endemic animals in particular and monitoring their history and current habitats. Their mission is to permanently protect them from damage and to restore them.

With their science-based management and conservation measures for successful environmental enhancement, the Galapagos is viewed as an example of long-term governance and used to demonstrate the positive and negative aspects of ecotourism.

(Source: Bill Roberson, President and Marika Roberson, Vice-President of International Nature & Cultural Adventures)







AMBASSADEUR DE
L'ENVIRONNEMENT

12.4 - The eco-responsible commitments of the trail events manager

What is the environmental impact of organizing an event? How do you measure it? How to reduce it sustainably? How can new standards and behaviors be introduced?

Events often appear to be a privileged means of contributing, as part of the global approach to sustainable development, to the construction of an eco-citizen identity by shaping the behavior and habits of competitors, spectators and partners in a permanent way. It is important to understand that the event is at the service of the development of the territory and that it must therefore be built in parallel between the organizer and all the local partners.

It is with this perspective of sustainable development that the NGO WWF (World Wild Fund for Nature) in partnership with the French Ministry of Sports has established the GESI (Grands Événements Sportifs Internationaux): a protocol for international sport events. This protocol has been signed by the following sporting organizations: the Tour de France, Roland Garros, the World Handball Championship and by dozens of other event managers. The UTMB® Mont-Blanc, who has also signed this charter, created its own "Environmental Commission" in 2016, with the mission of adapting these general measures to events organized on trails, identifying the risks generated by the running and proposing concrete actions to protect the environment.

The largest Trail-Running event in the world, the UTMB® Mont-Blanc welcomes every year more than 50,000 people (10,000 runners, companions, organizers, and so on) during the weekend of the event on the Tour du Mont-Blanc path. It has now become a showcase and a pioneer in terms of building an eco-citizen identity.

The fifteen proposed GESI commitments cover three areas of the sustainable development concept: environment, social and economic. Ten of which have a direct link with ecology: this chapter only deals with these ten measures corresponding to the topic of the chapter.



Commitment 1: A minimum of 50% of sustainable food in the meal service for participants, spectators and employees must be implemented:

- A certified seasonal catering offer (based on recognized labels), preferably sourced locally, regionally, and then extended to nearby territories (distance <400km);
- A range of wholesome food, promoting plants and comprising at least one vegetarian dish;
- A management system to reduce food waste;

- Raising public awareness of responsible and organic food.

This 50% are to be calculated according to the volume or weight of products recommended in the catering.



Commitment 2: At least 80% of trips made by active mobility, public transportation or carpooling, including trips before, during and after the event:

- Participants (athletes, people accompanying them, the media, etc.);
- Event collaborators and organizers (employees, volunteers, service providers, etc.);

Active mobility includes any form of transportation (walking, cycling, etc.) that uses only human energy.



(Commitment 3: 80% of products sold should have the label of SRE, criteria for Social Responsibility Enterprise);



Commitment 4: reduce waste consumption to 25 % and re-use, recycle or recover 60 % of the total waste. Recycling waste includes all separated, recyclable and reusable waste:

- Catering utensils;
- Marking materials;
- Information and advertising signs.



Commitment 5: preserve ALL natural sites. No areas are to be damaged in any way. The environmental impact assessments of the "Natura 2000" type and the studies and actions to avoid or mitigate the environmental impact can be considered as a guarantee of this commitment. Counterbalancing measures can only be considered as a last resort after a review of all possible avoidance solutions;



Commitment 6: 100% of energy and water consumption is regulated and maximized. At least 25% of energy consumption must come from renewable energy source or energy reuse;



(Commitment 7: 100% of sites dedicated to the public, are to be accessible by people with disabilities);



(Commitment 8: At least one action promoting accessibility for disadvantaged individuals);




Commitment 9: At least one innovative "eco-responsible" initiative tested during the event;




Commitment 10: One or more ambassadors of sustainability (champions, sportsmen, etc.) mobilized for the event or for the discipline in question;



(Commitment 11: 100% of volunteers should be valued and thanked, such as donation of equipment, free catering, a friendly debriefing meal, etc.)

 **Commitment 12: At least one commitment to a solidarity cause,** for example, a certain number of 'solidaire race bibs' whose registration fees are donated to finance a cause;

 (Commitment 13: At least one action to promote gender equality in positions of responsibility);

 **Commitment 14: a "sustainable development" referent identified within the organization;**

 **Commitment 15: at least one action or program to raise awareness of eco-responsibility.**

EXAMPLE OF ECO-RESPONSIBLE MEASURES FOR THE ORGANIZATION OF TRAIL RUNNING

UTMB® ENVIRONMENTAL MEASURES

The week of this event attracts 60,000 people each year, including nearly 10,000 competitors on the trails of the Tour du Mont Blanc. It results in 10 million Euros in economic benefits for the valley, but also a heavy carbon footprint (58% of the competitors do not come from France and more than 20% from another continent) and causes intensive trampling of soils in the mountains and with disturbance to the flora and fauna.

With the signing of this GESI charter in 2017, the organizer created its very first "environment commission". Therefore, its mission is to adapt these 15 general measures according to events on the trails, to identify potential risks and to propose concrete actions. Its first evaluation report for its 2016 edition established that the organization of the event had already achieved seven of the 15 objectives of the charter, in particular those related to eco-responsibility.

- For commitment 1 (responsible food), the UTMB® acts on the 15 tons of solid food and 30 tons of liquid supplies set up over the entire week of the event, for example:

- Fresh products, dairy products, cheeses, dried fruits, fruit juices, wines, etc. are primarily from the regions crossed by the race;
- With energy bars produced from organic farming.

However, considering that the purchase price of labeled products is often higher, the delivery time of organic agricultural products is longer and more binding than industrial products, there is still important room for improvement on food issues. The Coca-Cola branded drink, for example, is often at the center of discussions given its impact and its origin in mass industrial sectors: the product is, however, much appreciated by trail runners and felt to be necessary because it facilitates digestion, provides rapid sugar intake and effectively quenches thirst.

- For commitment 2 (eco-responsible transport): the UTMB® has been setting up its own transport system since 2004 to facilitate its runners when they travel from Chamonix to the starting points of various races held on the slopes of the Mont Blanc in **France, Italy, and Switzerland**. Each year, the



organization publishes a "mobility guide" read by 84% of people attending the event, promoting flexibility to rely on your own two legs, use of public transportation and/or carpooling. One objective, in particular, is to further reduce CO₂ emissions each year and to limit parking spaces around the event's supply-areas.

Questionnaires are sent out after each event to runners and accompanying persons. 45% of forms were collected and completed, thus making it possible to collect a great deal of information on the behavior and travel arrangements of people coming to Chamonix during the week of the event. The UTMB "transport manager" is also in charge of monitoring individual traffic and the means to which they came by, in order to assess the order of magnitude of the overall carbon emissions balance of the event: a complex calculation that include all pre, interim and post-event travel (by car, bus, train, helicopter, plane). Since 2018, the UTMB has relied on software for calculating CO₂ emissions.

- For commitment 4 (waste reduction, recycling and reuse):
 - Disposable tableware has been removed from supply-areas;
 - 90% of the marking materials are reused year after year;
 - A partnership has been signed with a local waste sorting company;
 - The sports ambassadors apply strict guidelines on environmental awareness programs prior to and during the event...

However, the increase in the number of nations at the start of the UTMB races (111 Nationalities in 2019) remains critical with constant awareness-raising and preventive measures for each nation and culture as they have different awareness of waste dumping. For the operator, the principle that must guide his actions to have as little waste as possible is to reduce waste production.

- For commitments 5 (respect for natural sites) and 10 (appointment of ambassadors):
 - All of the UTMB's different routes and the entire 170 km of the Tour du Mont-Blanc are systematically cleaned before and after each race. 60 m³ of waste is thus collected, repatriated, and sorted in Chamonix in order to be sent for treatment;
 - Specific signage is installed in certain sensitive places to prohibit the use of walking poles which could accentuate soil erosion;
 - The regulations prohibit runners and hikers from "cutting" trail bends with an obligation to remain on the walking area of the trail;
 - Rehabilitation is carried out after each event by the environment commission, with volunteers and in partnership with local stakeholders (city, regions, national forestry office, and etc.) on the sections of trails that may have suffered degradation due to over trampling.
- For commitment 6 (non-waste of natural resources):
 - Ensuring that participants' refreshment points are installed close to sources of drinking water (taps or natural sources);
 - The use of bottled water is only used in areas without a source of natural drinking sites, making it a precious commodity and therefore ensuring it will not go to waste;
 - More than 97% of the electricity during the event comes from renewable energy sources...



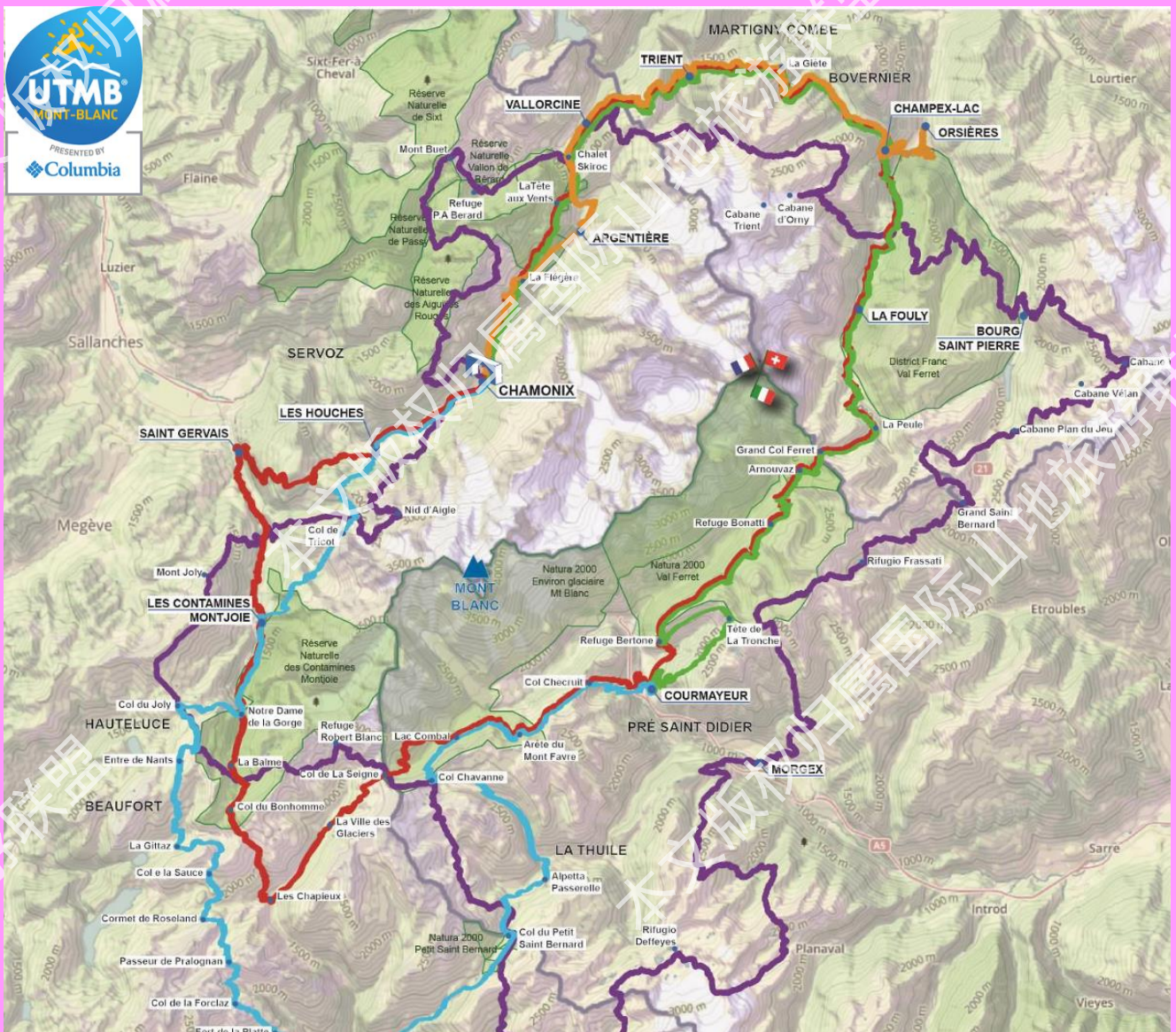
- For commitment 9 (experimenting with eco-responsible innovation), two actions are specifically implemented, tested and improved:

- Visible and legible markings and information panels at night are installed in sensitive zones;
- "Eco-cups" available to runners have been set up at the refreshment points by a network of partners.. Their aim is to replace disposable cups, a great scourge for organizers and nature, with individual cups that can be reused, sorted, and recycled into hangers, insulation, clothing and even human prostheses. 100,000 disposable cups are thus saved during the week of the event...



- For commitment 12 (support for solidarity actions): the UTMB directly donated nearly US\$340,000 to ten associations thanks to their 150 "solidarity bibs" ...

- For commitment 14 (the organization's Sustainable Development referent): UTMB has, in collaboration with the Conservatory of Natural Areas of Haute-Savoie (known as the ASTERS) and the University of Savoie-Mont-Blanc, recruited a referent intern (studying a Master of Science and Technology" and specializing in Mountain Equipment, Protection, and Management) to improve the procedures for passing the race through nature reserves and optimizing its objectives.



These are the six routes of the UTMB events:

- Red: the UTMB® trail which is 190 km long and has a 10,000 m positive elevation gain
- Green: the CCC® trail which is 101 km long and has a 6,000 m positive elevation gain
- Blue: the TDS® trail which is 120 km long and has a 7,200 m positive elevation gain
- Orange: the CCC® trail which is 56 km long and has a 3,500 m positive elevation gain
- Purple: the PTL® trail which is 300 km long and is a combination between trail running and orientaring race
- Pink: the YCC® trail which is 15 km long and suited for junior hikers

This event is the greatest trail-running event in the world. The UTMB® brings together over 60,000 people during the annual trail week, including nearly 10,000 competitors on the trails of the Tour du Mont Blanc. The organization has now become well-known and is a pioneer in finding solutions to accommodate this temporary concentration of trail runners and hikers.

(Sources: Jules Pijourlet, Head of Sustainable Development and Territorial Relations by the UTMB Group)



Footbridge (wooden planks) placed temporarily on the ground of a wetland for passage of hikers



KEY POINTS TO REMEMBER



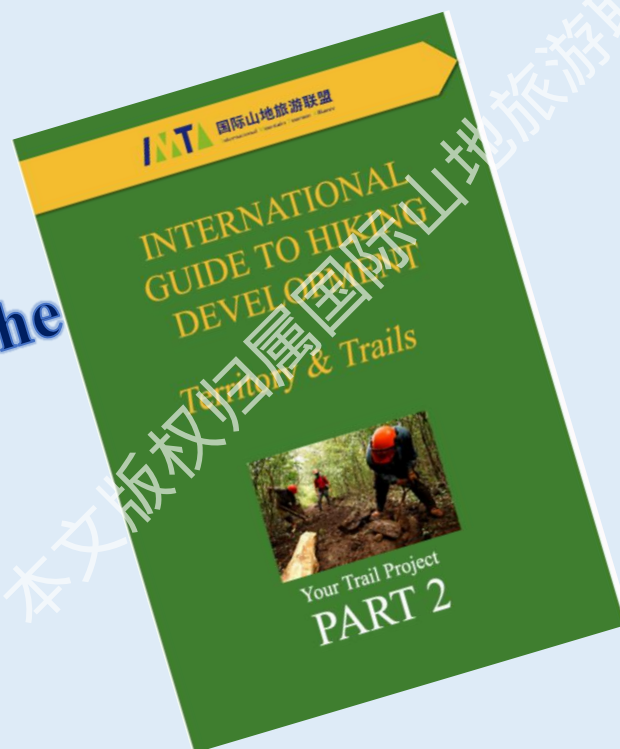






Enjoy your hike!

See you in the second part of the IMTA study...



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