

INTERNATIONAL ORIENTEERING FEDERATION

Orienteering and the Environment

IOF Survey

1 March 2023

ENVIRONMENT AND SUSTAINABILITY COMMISSION,

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Contents

Contents.....	1
<i>Foreword</i>	3
<i>Introduction</i>	4
<i>Executive summary</i>	7
<i>IOF Survey – Orienteering and the Environment</i>	9
<i>Summary of the results</i>	11
QUESTION 1: Importance of different environmental aspects.....	11
QUESTION 2: National environmental legislation related to orienteering	12
QUESTION 3: Permissions required for organizing an orienteering competition.....	13
QUESTION 4: Cooperation with stakeholders	13
QUESTION 5: Environmental conflicts	16
QUESTION 6: Federation’s environmental management	17
QUESTION 7: Scientific research studies on orienteering’s environmental impacts.....	18
QUESTION 8: Use of orienteering’s green image for marketing the sport.....	19
QUESTION 9: Needs of environmental assistance from the IOF	22
<i>Discussion</i>	23
Comparing the results of this Survey with the 2011 Survey.....	24
<i>Conclusions</i>	25
<i>Annex 1: Questionnaire used in the survey</i>	27
<i>Annex 2: Answers of the responding countries/federations</i>	34
QUESTION 1: Importance of different environmental aspects	34
QUESTION 2: National environmental legislation related to orienteering	37
QUESTION 3: Permissions required for organizing an orienteering competition.....	39
QUESTION 4: Cooperation with stakeholders	42
QUESTION 5: Environmental conflicts during the past 5 years.....	46
QUESTION 6: Federation’s environmental management	48
Question 7.1. Are you aware of scientific research studies conducted in your country with regard to orienteering’s impact on the environment?	54
QUESTION 8: Use of orienteering’s green image for marketing the sport.....	55
QUESTION 9: Needs of environmental assistance from the IOF	60
Question 10.1. How does the access to land for orienteering within your country look like in the next 5 years?.....	62

Question 10.2. How does the access to land for orienteering within your country look like in the next 5 years? Comments (trends, problems, planned activities).....	64
Question 11.1. What support do you need from the IOF Environment and Sustainability Commission?.....	65
Question 12.1. Any other comments.....	67

Foreword

The United Nations early recognized the important role of sport for achieving the 17 Sustainable Development Goals and has emphasized and advanced the use of sport as a vehicle to foster sustainable development – confirmed by the resolution “Sport as an enabler for Sustainable Development” adopted by the UN General Assembly in 2018. Sport must contribute directly through reducing negative footprint, especially on the environment, and increase the positive footprint, and beyond, sport have a unique position and opportunity to create awareness and mobilize the society to take actions.

In 2022, the General Assembly of the International Orienteering Federation adopted a new main goal; to become a global and sustainable sport. The International Orienteering Federation has committed to be among the leading sport organizations both to contribute directly to sustainable development and to create awareness and mobilize the ecosystem we are part of. To become a sustainable sport, we need action in all of the three sustainability dimensions; environmental, social and economic.

Orienteering is a sport that exists in a close relationship with the environment and nature – our sports arena. Several factors limit the negative footprint of our sport on the environment, but we must acknowledge that we need to do more to manage the environmental conflicts that exists, reduce our GHG emission, secure good relations to other stakeholders and make sure our relationship with the environment and nature is a truly good symbiosis.

Knowledge and dialogue with stakeholders must be the fundament of our work to succeed with reducing the negative footprint and increase the positive footprint of our sport. This survey, which also enables a comparison to findings back in 2011, is an important contribution to this. On behalf of the International Orienteering Federation, I thank our Environment and Sustainability Commission for their work on this. As readers, we must take the findings with us in our work to make orienteering a global and sustainable sport and make other stakeholders aware of this report and the findings.



Leho Haldna

President of the International Orienteering Federation

Introduction

We are not alone in the world; we are not alone in a forest. This is the first consideration we must acknowledge when we deal with our expectations, desires, opinions and ambitions in the practice of orienteering. Many other stakeholders have their own legitimate expectations, desires, opinions and ambitions regarding the “use” of the natural environment.

The protection of the natural environment has increased its importance in the minds of citizens over the years, leading to the growth of “green” movements, of legislation on nature conservation, of conflicts between different interests and points of view. The very desire for a contact with nature in our leisure time has multiplied the activities that are performed outdoors, including other sports, and therefore has increased the pressure on nature and the competition between different expectations.

This must be acknowledged with realism if we want to secure a future for our sport. Orienteering is generally considered a sport with minimal negative impact on nature and the environment, due to the absence of permanent infrastructure, reuse of most materials, good record of cleanliness in the use of event arenas, etc.

However, there are critical issues that orienteering is facing, with different relevance according to the types of environment and the social context of different countries.

There are countries where hunting (especially large mammals) has a strong tradition and represents an important source of income to forest owners, who may see orienteering as a threat. There are countries in which the level of protection ensured by legislation to natural areas strongly limits the availability of suitable orienteering terrains. Some countries allow free access to private forests, while some give the forest owner exclusive rights on any form of land use.

Many of the potential negative effects of an orienteering event can and must be minimized with appropriate preparation by the organisers and the course planners, such as disturbance to wild mammals and other terrestrial animals, to nesting birds, damage to some vegetation types, such as bogs and other humid sites, lichen covered rocky outcrops or refugia of rare plants. It is the responsibility of orienteers, their clubs, and Federations to make sure that the highest standards are observed to avoid permanent damage. At the same time, it must be emphasized that most disturbance is of a transient nature, in normal conditions.

The general recommendation in all cases is to foster dialogue rather than confrontation with the other stakeholders exposing the strong points of orienteering while acknowledging that, depending on the circumstances, orienteering may have negative impacts on the environment that it is the duty of organisers, athletes, amateurs, and fans to minimize.

An emerging concern that affects all components of society, including the sports world, is climate change, a phenomenon still out of control despite many international agreements and declarations. The Paris Accord of 2015 was not followed by pledges (nationally determined contributions) of the magnitude necessary to achieve the 2°C target, let alone 1,5°C. And the actions implemented were in most cases well below the commitments, with the consequence that net GHG emissions continue to rise.

Orienteering, as a sport, is both a victim and an agent of climate change. A victim because a broad range of consequences of climate change negatively impact forests: droughts, fires, windstorms, attacks by insects and diseases grow in frequency and intensity with abnormal fluctuations of temperatures and precipitations. But orienteering, like most sports, is also a cause of climate change, small if compared with other human activities and also other sports, but non negligible; with mobility by far the largest source of GHG emissions.

However, sports in general and orienteering in particular, for its special relationship with nature, may be a vehicle of a widespread ecological conscience, not only in the very performance of sports events, but also in daily behaviors of athletes, amateurs and fans. It has been calculated that 2/3 of GHG emissions depend on our lifestyles, that is, choices that we and our families make in our daily lives about food, mobility, housing, clothing. We have a responsibility not only for causing the least possible harm to environment and climate, but also to lead by example to spread positive behaviors in the people we meet.

The IOF, besides confirming its core values (Sustainable, Inclusive, and Ethical) has declared as its main goal “to become a global and sustainable sport”. Sustainability is not only respect for the environment, but its social and economic pillars are intertwined with it; a dialogue with stakeholders on environmental aspects is a key component of the social pillar; and sobriety in the use of infrastructure, materials and energy has important positive reflections on the economic pillar of sustainability. The sustainability of sports is a key priority also for the IOC which has partnered with the UN Intergovernmental Panel on Climate Change to launch the “Sports for Climate Action” of which the IOF is an active member.

This survey, carried out ten years after an analogous one, shows that environmental issues and relationships with stakeholders are extremely relevant for orienteering, despite differences between countries and regions.

What emerges is the need for reliable, scientific information to guide both the preventive actions to avoid or limit damage and the dialogue with the other stakeholders. There is also a clear demand for practical guidelines to be used in the organization and management of orienteering events and of educational materials and awareness-raising initiatives.

These suggestions will guide the IOF Environment and Sustainability Commission in the months and years to come, hopefully with the support of expertise by knowledgeable members of the orienteering community.

A handwritten signature in black ink, appearing to read 'Stefano Bisoffi'.

Stefano Bisoffi

Chair, Environmental and Sustainability Commission (IOF-ESC)

Executive summary

The Survey “Orienteering and the Environment” follows an analogous survey carried out in 2011 to understand the main issues faced by the orienteering movement in different countries. With the current survey we could update the situation with a broader response. The preservation of the environment is a key pillar of the IOF sustainability ambition but the relationship between orienteering and the environment has clear implications also on the other two pillars of sustainability, social and economic. The information gathered will help to improve the performance of the IOF and its Member Federations and define the priorities for the IOF Environment and Sustainability Commission in the years to come.

The areas covered by the survey were the following:

- National circumstances regarding environmental issues related to orienteering.
- Significance of specific environment issues related to orienteering.
- Possible environmental conflicts occurred in connection with the organization of orienteering activities.
- Measures taken at the national level for the management of orienteering’s environmental issues.
- Needs of support from the IOF on environmental issues

Issues related to the disturbance of vegetation and wildlife appear as the most common, whereas the use of materials and energy rank lower, probably reflecting the moderate use of both in orienteering events. However, it must be noted that all nine categories included in the survey received a full range of replies, from “not important” to “very important”.

Legislation on nature conservation is the most common in affecting orienteering (for over 90% of respondents), followed by rules on access to land, both private and public; a high rank also of regulation of hunting points at a high relevance of appropriate relationships with stakeholders. Indeed, events in most countries require permissions from landowners, more often than from environmental and police authorities, which are also necessary in more than 50% of the countries.

Relationships with stakeholders are generally based on advance information when dealing with private actors and written notice with authorities. As far as environmentally concerned stakeholders are concerned, the relationship is generally with official authorities and much less with environmental NGOs.

Again, when conflicts are reported, by far the most frequent ones are with landowners over access, followed by conflicts with environmental authorities for access to conservation areas.

A relative majority of Member Federations has incorporated environmental issues in their strategy, have a commission or an individual appointed as reference for environmental aspects and include environmental protection in training courses for organisers and course planners. However, when it comes to specific, more focused actions, such as the production of educational materials, the establishment of environmental targets, the collection of data, only a few federations have reported concrete initiatives.

Most Federations report absence of knowledge about scientific approaches to the study of the environmental impact of orienteering, the impact or lack of it being generally based on anecdotal evidence. Possibly a consequence of that, it appears that the environment-friendly nature of orienteering is an argument used to attract new practitioners for only half of respondents. As for sponsors, the percentage is somehow higher than in 2011, but limited to 2/3 of the cases.

Scientific studies addressing the actual environmental impact of orienteering is the most frequently cited kind of support desired by Member Federations, followed by practical guidelines on the organisation of events. These requests will guide the action of the Environment and Sustainability Commission in the coming years.

IOF Survey – Orienteering and the Environment

The International Orienteering Federation considers environmental issues to be of strategic importance to the success and sustainability of Orienteering. Increasing global concerns for the state of the environment has obliged individuals and all organizations in society to take environmental responsibility for their actions. This applies to private enterprises and governmental organizations as well as NGOs like sports organizations. In the field of sport, environmental responsibility is manifested, for instance, in the form of specific environmental programs for major sports events, such as the Olympic Games or World Championships.

For orienteering, good management of environmental issues is a question of safeguarding the basic requirements of our sport. Most orienteering takes place in nature, in the forest and the countryside. Nature is our sport's venue for which all orienteers must share a great responsibility. Our possibility to organise events in nature and land owned by others requires good cooperation with all relevant stakeholders as well as measures by which environmental aspects can be considered in the planning and implementation of the events.

We also must produce and disseminate reliable scientific information on the environmental impacts of orienteering activity, in order to ensure and demonstrate that our good practices are based on firm ground, rather than anecdotal evidence or even preconceived opinions and desires.

Most orienteers have well-developed environmental awareness, and they also show environmentally conscious behavior in their lives. In fact, our sport provides its enthusiasts with a unique possibility for building a personal relationship with nature. "Being at one with nature" is one of the biggest strengths in marketing our sport to sponsors and newcomers. It may well also be a great advantage for orienteering's aspirations to enter the Olympic family. Even though scientific research has shown that orienteering has only a very small impact on nature, the environmentally sound character of our sport is not self-evident. We also must take concrete actions by which we demonstrate our responsibility for the well-being of nature and the environment.

The International Orienteering Federation has had an Environment Commission since 2000 (now named Environment and Sustainability Commission, ESC). The main duties of the commission have been to monitor environmental impacts of orienteering world-wide, to keep contact with outdoor sports organizations, to inform them of the environmentally friendly character of orienteering, and to assist the IOF, its commissions and member federations on matters

related to land access and other environmental issues.

The survey “Orienteering and the environment” in IOF member countries was conducted in November 2021 by the IOF Environment and Sustainability Commission with the assistance of the IOF Office. The aim was to gather information on the state of environmental issues in the IOF member countries and measures that national federations have taken to manage environmental issues. The information gathered will be used to improve the IOF environmental and sustainability policies and to produce guidelines and checklist for the environmentally friendly conduct of all forms of orienteering events.

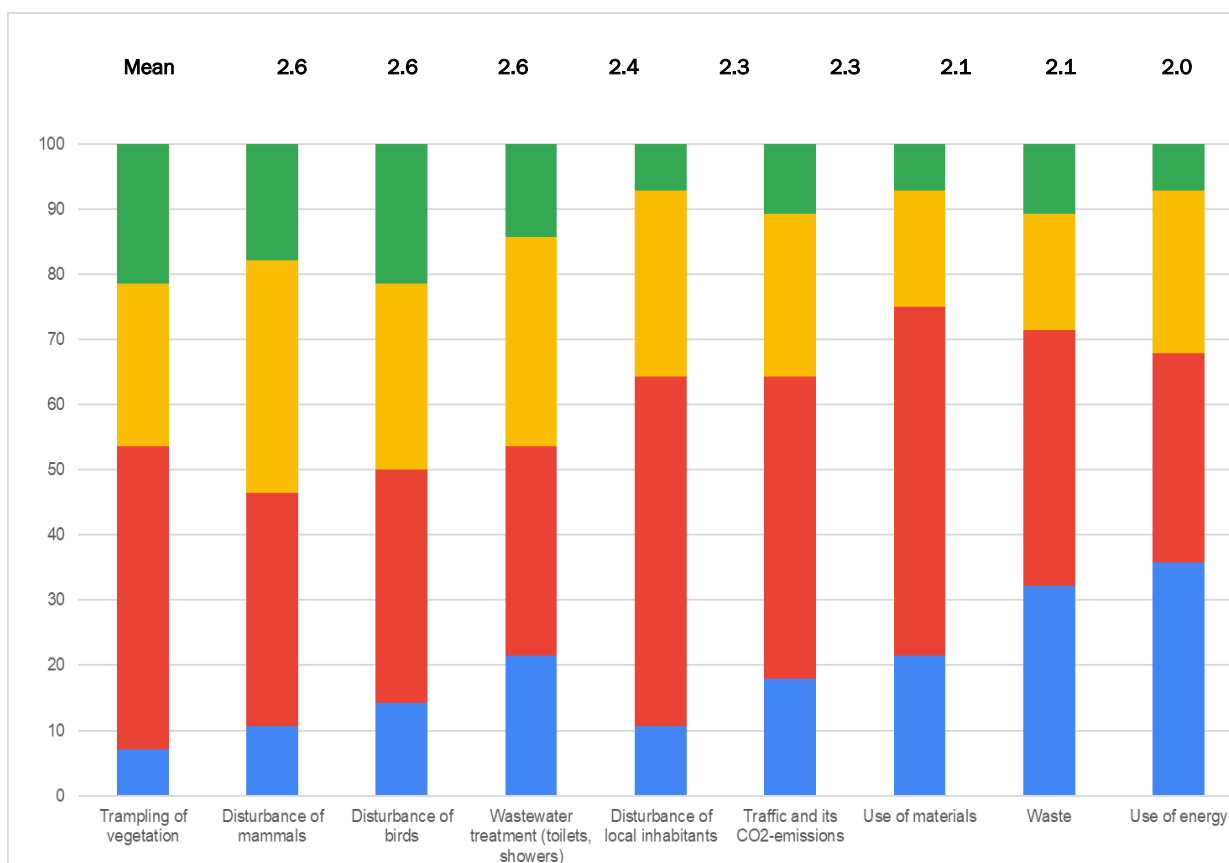
The questions of the survey were related to the following topics:

- National circumstances regarding environmental issues related to orienteering.
- Significance of specific environment issues related to orienteering.
- Possible environmental conflicts occurred in connection with the organization of orienteering activities.
- Measures taken at the national level for the management of orienteering’s environmental issues.
- Needs of support from the IOF on environmental issues.

Summary of the results

QUESTION 1: Importance of different environmental aspects

How could you assess the importance of the following environmental aspects of orienteering in your country?



The top aspects were trampling of vegetation, disturbance of mammals and birds. Wastewater treatment, disturbance of inhabitants traffic and its CO₂-emissions have middle rank. Low use of energy and materials is one of orienteering's strengths, and therefore these aspects were generally not considered important.

Country specific observations

Trampling of vegetation

Very important: EST, NED, SGP, CAN, GBR, NOR
Not important: DEN, BRA

Disturbance of birds

Very important: NED, CAN, HUN, GBR, EST, NOR
Not important: RUS, AUT, CRO, ISR

Disturbance of mammals

Very important: NED, CAN, SWE, BRA, NOR
Not important: RUS, SUI, ISR

Wastewater treatment

Very important: DEN, CAN, CRO, BUL
Not important: SGP, AUT, AUS, BEL, JPN, ESP

Country-specific observations (cont.)**Disturbance of local inhabitants**

Very important: CAN, BRA

Not important: BEL, HUN, ESP

Use of materials

Very important: SGP, CAN

Not important: NED, SUI, AUS, HUN, CZE, JPN

Use of energy

Very important: CAN, BRA

Not important: NED, SUI, DEN, AUT, AUS, HUN, CZE, JPN, EST, FIN

Traffic and its CO2-emissions

Very important: CAN, GBR, BUL

Not important: DEN, BEL, CZE, JPN, ISR

Waste

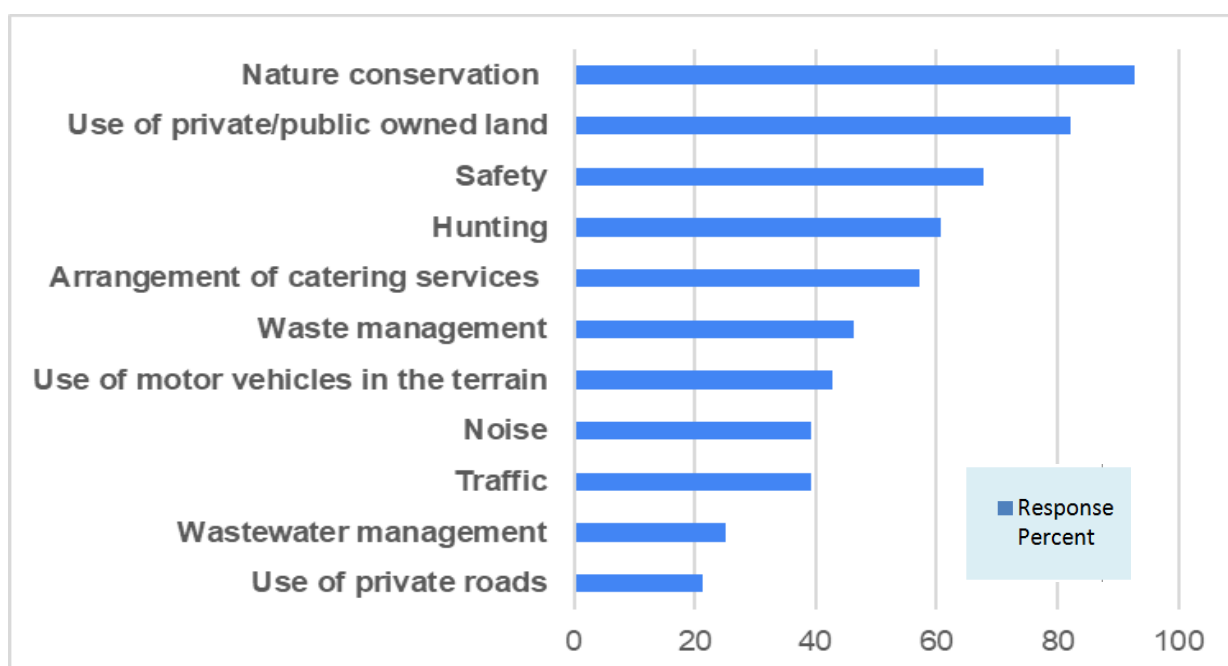
Very important: SGP, DEN, CAN, BRA, CZE

TUR, POR, CRO, BUL

Not important: NED, SUI, AUS, JPN

QUESTION 2: National environmental legislation related to orienteering

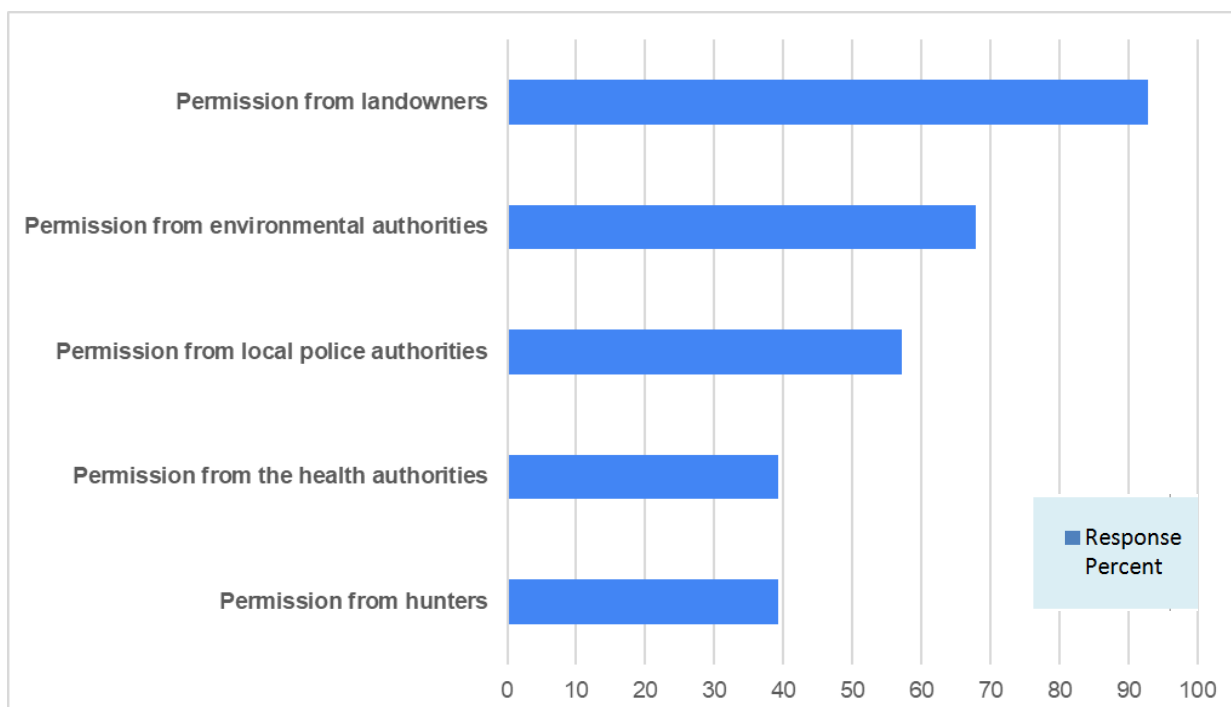
What issues stated in your national environment related legislation has to be taken into account when organizing orienteering competitions in your country?



Nature conservation and use of private and public owned land were legislative issues that must be taken into account in over 80% of the responding countries when organizing orienteering events. More than 60% of the countries also refer legislation about Safety and as to be considered when organizing orienteering competitions.

QUESTION 3: Permissions required for organizing an orienteering competition

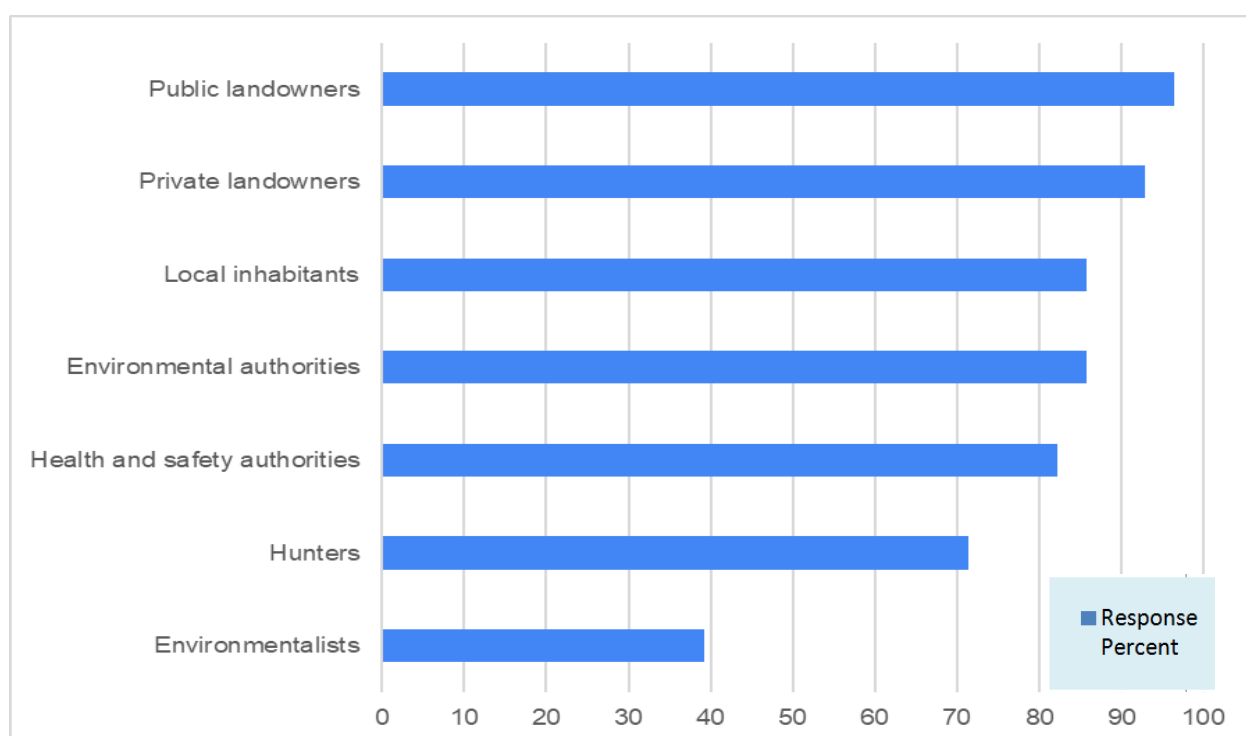
What permissions must the organiser of an orienteering competition have in your country?



Permission from landowners is needed in more than 90% of the countries. Countries who replied that landowners' permission is not needed for organizing a competition were Norway and Croatia. In Norway permission is needed under certain conditions (e.g., events in protected areas).

QUESTION 4: Cooperation with stakeholders

What kind of cooperation is usually undertaken with the stakeholders in the arrangements of orienteering competitions in your country?



We observed from the responding national federations that the level of cooperation is high with most of the stakeholders, with more than 90% of the countries collaborating in some way with the public and private landowners. Also, more than 80% of the countries develop some type of cooperation with the local inhabitants, environmental and health and safety authorities.

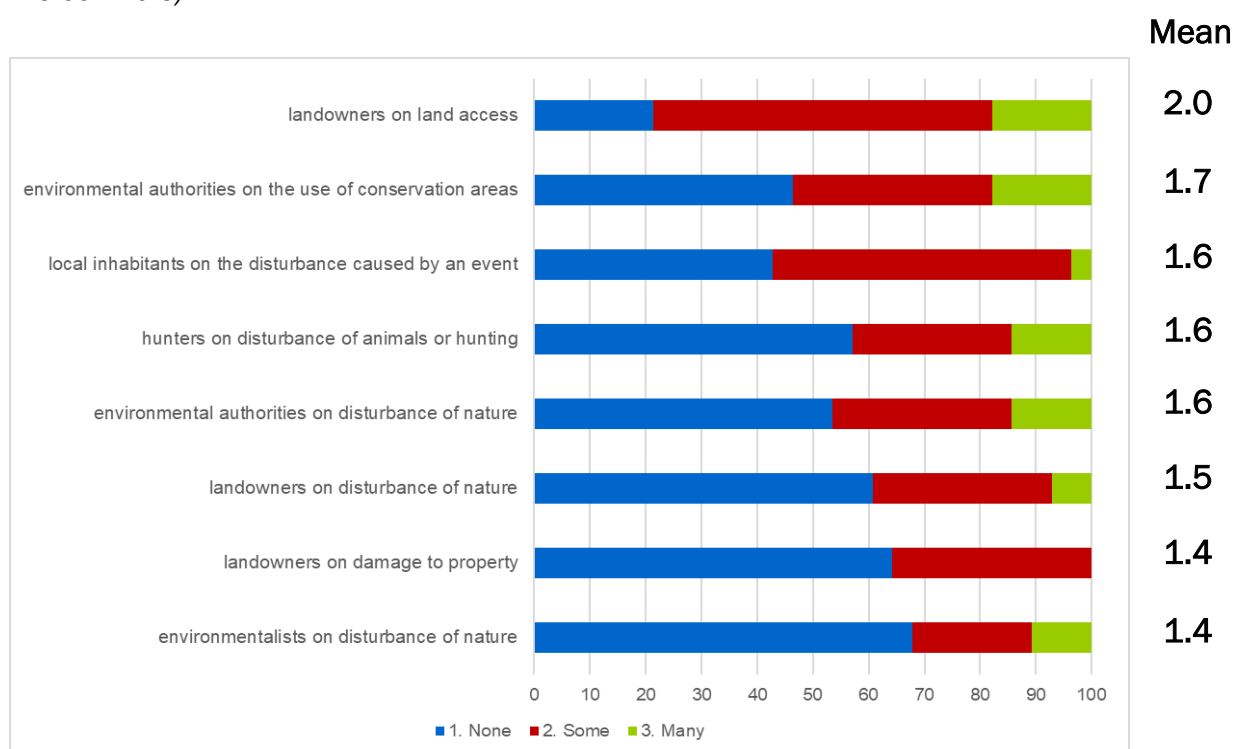
Based on the answers it can be concluded that there is a great variety in the need and form of cooperation between different countries. The following table summarizes the examples given on the form of cooperation with different stakeholder groups.

Stakeholder group	Forms of cooperation (response percent)
Public landowners	<ul style="list-style-type: none"> • Information in advance (57%) • Written notice (68%) • Discuss problems (36%) • Informal permission (21%) • Representatives at competitions (11%) • No cooperation (4%)
Private landowners	<ul style="list-style-type: none"> • Information in advance (50%) • Written notice (43%) • Discuss problems (32%) • Informal permission (39%) • Representatives at competitions (18%) • No cooperation (7%)

Stakeholder group	Forms of cooperation (response percent)
Local inhabitants	<ul style="list-style-type: none"> • Information in advance (64%) • Written notice (14%) • Discuss problems (21%) • Informal permission (18%) • Representatives at competitions (14%) • No cooperation (21%)
Environmental authorities	<ul style="list-style-type: none"> • Information in advance (46%) • Written notice (57%) • Discuss problems (36%) • Informal permission (7%) • Representatives at competitions (14%) • No cooperation (14%)
Health and safety authorities	<ul style="list-style-type: none"> • Information in advance (43%) • Written notice (43%) • Discuss problems (21%) • Informal permission (7%) • Representatives at competitions (21%) • No cooperation (18%)
Hunters	<ul style="list-style-type: none"> • Information in advance (39%) • Written notice (21%) • Discuss problems (21%) • Informal permission (29%) • Representatives at competitions (4%) • No cooperation (32%)
Environmentalists	<ul style="list-style-type: none"> • Information in advance (21%) • Written notice (7%) • Discuss problems (18%) • Informal permission (4%) • No cooperation (61%)

QUESTION 5: Environmental conflicts

What kind of environmental conflicts have occurred in connection with the organisers of orienteering activities in your country (what is your federation's perception of the occurrence of the conflicts)?

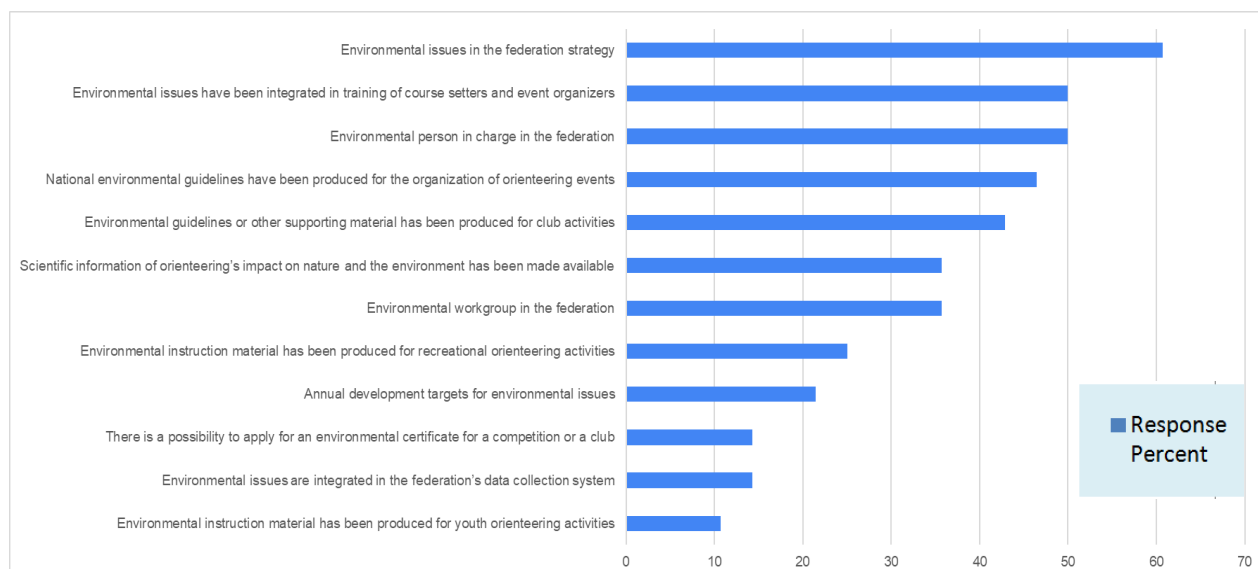


Based on the federations' perception, the most frequent conflicts are with landowners about land access, followed by conflicts with environmental authorities on the use of conservation areas.

Generally, severe and frequent conflicts between orienteering's stakeholders seem to be rare and they have a country specific nature.

QUESTION 6: Federation's environmental management

What kind of measures has your national federation taken for the management of environmental issues?



More than 60% of the federations have taken the environment as a strategic viewpoint. However, comprehensive measures of implementing the strategy are missing in most cases. Improvement is needed especially regarding development of national guidelines and training of course setters and event organisers.

Only half of the federations have a person in charge for environmental issues, and few federations have produced instruction material for youth and recreational sectors, which is an important educational viewpoint.

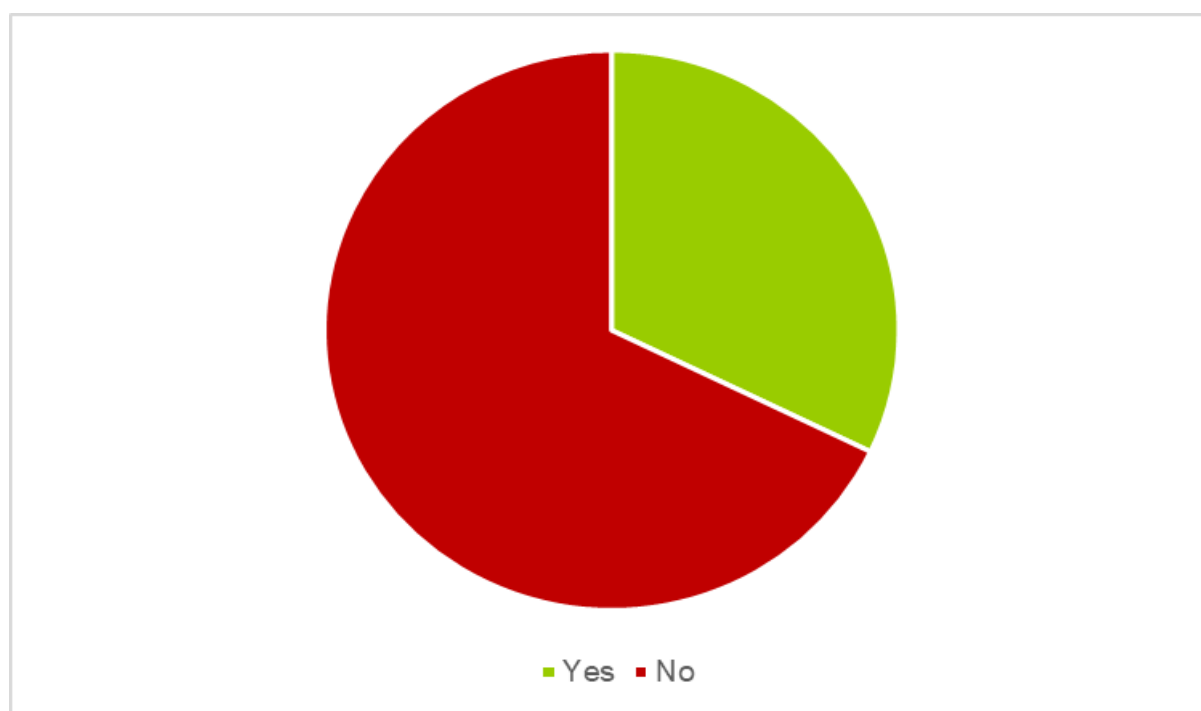
Also, it is important to integrate environmental issues in the national federations' data collection systems as well as collect scientific information of orienteering's impact on environment.

QUESTION 7: Scientific research studies on orienteering's environmental impacts

Are you aware of scientific research studies conducted in your country about orienteering's impact on the environment? (E.g., impact on vegetation, mammals, or birds; CO2-emissions of traffic, material or energy consumption, wastewater discharge, waste production, etc.)

Please, give the name, year, and author of any studies.

Question 7.1. Are you aware of scientific research studies conducted in your country with regard to orienteering's impact on the environment?

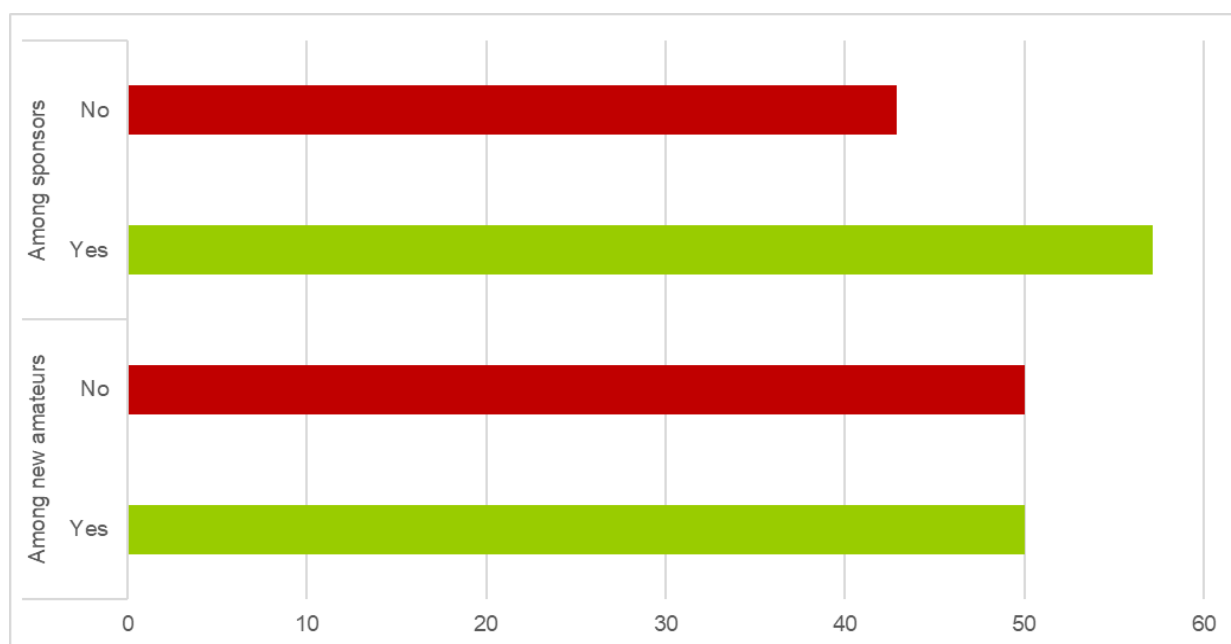


Only one third of the national federation are aware of scientific research studies conducted in their country regarding orienteering's impact on the environment.

This question was used for getting information on the possible new research studies to complement the database of the IOF Environment Commission.

QUESTION 8: Use of orienteering's green image for marketing the sport

- a) Have you used orienteering's green image as an argument when trying to get sponsors for your national federation or large orienteering events? What is your perception of the green image as a selling argument?



Twelve respondents out of 28 (32%) reported that they have not used green image for marketing the sport among sponsors. The number of respondents that use and not used green image for marketing orienteering among new amateurs is the same.

Those who answered “yes” gave the following comments:

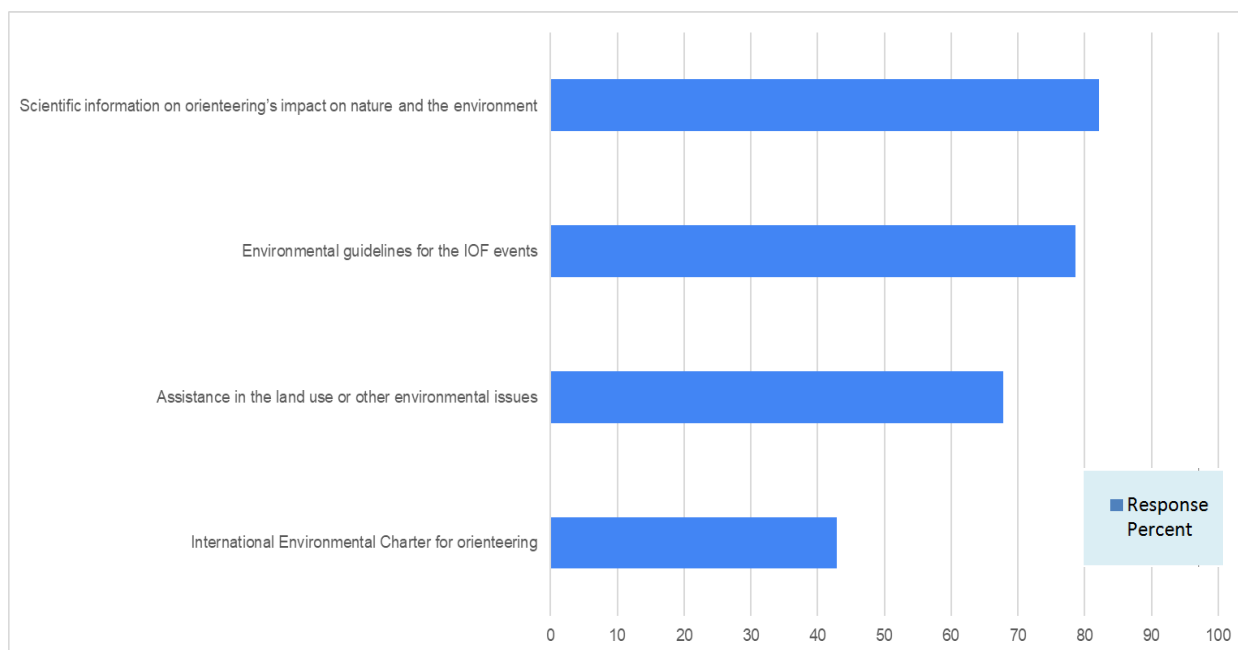
Netherlands	I cannot see how orienteering can have a green image. The positive effect I see is in the happiness in the orienteers' psyche and in the physical benefits of sport on the human body. These health benefits are not related to 'green' nature effects. On nature there are only negative effects: 1. People travel relative long distances to participate in events: by car or by plane. This has significant CO2 impact. 2. Orienteers trample nature and disturb animals. Its negative impact might be very small, but you can never claim that it is a positive impact.
Switzerland	One of different points in the marketing and communication to all
Canada	For grant applications the environmental aspects of the sport are highlighted. As well as for land use in conservation areas and land use permissions.

Austria	Green image is an essential argument in every event preparation and on all occasions, where our sport is presented, e.g., in schools
Belgium	Low impact sport in a natural environment.
Hungary	One of the mottos in Hungary: Orienteering is a green sport. I don't think we can say that to our races right now. However, I see the potential for us to actually say that we are green and we are trying to do everything we can to protect the environment. We use a lot of plastic right now, a lot of us go to races with cars that aren't full and we don't pay enough attention to nature, and so on. We are now working out the rules on these issues and I very much look forward to a successful year.
Sweden	The green image by Orienteering is well-known by the sponsors of Swedish Orienteering. But we have to step up and work together with our sponsors environmental knowledge to keep up the reliability as a green sport.
Italy	The green image of orienteering as a sport at one with nature is appealing to a number of sponsors and among beginners that are attracted to the sport. However, the environmental aspects have never been a primary focus in the search for sponsors.
Brazil	Our perception is that the green image of orienteering as a selling argument is changing over time. Some years, it did not have any impact in our results when negotiating with sponsors. Nowadays it seems to have a very good appeal and some company's desire to have their image linked to a "green" sport. Recently we had a project approved with Tereos Sugar and Energy Brazil. It is our biggest project in recent years. The main purpose is to offer training in long and middle-distance running and teach basic orienteering to physical education teachers. We also used the green image of orienteering to attract new members to our clubs. Brazil has warm weather most of the year and it is good for outdoor sports such as orienteering. The Confederation's directions to our clubs is to offer initiation clinics frequently and always use the contact with nature and the need to take care of it as its flagship. All our clinic's program offers at least one hour to discuss how our modern society affects nature and how we, as orienteers, should behave not only while in the forest, but especially in our daily life.
Estonia	Orienteering can be done everywhere, no need to build sport halls, swimming pools etc.
Turkey	I emphasize that orienteering is a sport that teaches environmental awareness and should be passed on to future generations.
Portugal	The green image of orienteering is used as an asset to convince sponsors, but is not the top argument.
Croatia	Our Federation often uses orienteering's green image as a way to promote the sport because it is aware of its positive impact on human

	mental and physical health. Marketing it as “green” is a good way to attract attention from new people, especially through media, but we put a bigger highlight on the fact that it is held in nature, not on its low environmental impact.
Spain	Orienteering is part of the solution to the environmental problem. The green image of orienteering has been used to raise the awareness of the athlete and to make the environmental administration aware of the benefits of our sport.
Finland	“Forest is our arena”. This is a new image for our sponsors. We are just in the beginning but hopefully we will attract sponsors this new theme.

QUESTION 9: Needs of environmental assistance from the IOF

What kind of assistance would your federation need from the IOF with regard to environmental issues?



The forms of assistance mostly needed is the production and dissemination of scientific information on orienteering's environmental impacts and environment guidelines for the IOF events. Assistance in land use and other environmental issues is also needed by the national federations.

Discussion

Based on the 28 responses obtained through the application of the survey and its subsequent analysis, the following main considerations were derived:

- The top environmental aspects were trampling of vegetation, disturbance of mammals and birds.
- Nature conservation and the use of land were the issues of environmental legislation that have to be taken into account for over 80% of the national federations.
- Permission from landowners is required in more than 90% of the countries
- The level of cooperation is high with the stakeholders in most of the countries, mostly with public and private landowners, local inhabitants, and environmental authorities.
- There is a great variety of forms of cooperation between different countries. Information in advance is the most used form of cooperation, regardless of the stakeholder.
- Most of the conflicts with stakeholder groups have occurred with landowners on land access and with environmental authorities on the use of conservation areas.
- In terms of national federations' environmental management, improvement is needed especially regarding the development of national guidelines and training of course setters and event organisers. Also is important to integrate environmental issues in the national federations' data collection systems as well as collect scientific information on orienteering's impact on the environment.
- Only a few of the national federations are aware of scientific research studies conducted in their country regarding orienteering's impact on the environment
- Most of the national federations reported that they need assistance from the IOF on production and dissemination of scientific information on orienteering's environmental impacts, and environment guidelines for the IOF events. Assistance is also needed in land use and other environmental issues.

Comparing the results of this Survey with the 2011 Survey

The first survey “Orienteering and the environment” in IOF member countries was conducted in 2011 by the IOF Environment Commission with the assistance of the IOF office. The aim was to gather information on the state of environmental issues in the IOF member countries and measures national federations have taken to manage environmental issues.

Next, we will compare the results obtained in the survey carried out in 2011 and this one carried out in 2021:

- The number of respondents increased between 2011 (n=19) and 2021 (n=28) by 47%. Thirteen national federations responded to both surveys (2011 and 2021): Australia, Bulgaria, Canada, Chinese Taipei, Finland, Great Britain, Israel, Italy, Portugal, Turkey, Spain, Sweden and Switzerland.
- In terms of the importance of the different environmental aspects, in 2011 the top aspects were the disturbance of mammals, like in 2021, but waste and wastewater treatment were considered more important than the disturbance of birds.
- As in 2021 nature conservation and the use of land were the issues of environmental legislation that have to be taken into account in most of the countries. However, safety was the most mentioned issue by national federations in 2011.
- In relation to permissions required for organizing orienteering competitions the results were similar in both surveys, with permission from landowners required in most of the countries.
- As in the 2021 survey the most used form of cooperation is high with most of the stakeholders, mainly with public and private landowners, local inhabitants, and environmental authorities.
- In both surveys the most frequent conflicts are with landowners and with environmental authorities on the use of conservation areas.
- More than 60% of the national federations have taken the environmental as a strategic viewpoint in both surveys. Also, the improvement in the development of national guidelines and training of course setters are considered important measures to be

taken. In the 2021 survey emphasis is given to the importance of a person in charge in the federation to manage environmental issues.

- In relation to the use of orienteering's green image for marketing the sport, the situation improved with a higher percentage of respondents answering that they have used green image as a selling argument (68% in 2021 and 56% in 2011).

Conclusions

What emerges from the survey is the variety of situations and conditions in which orienteering is practiced around the world and this affects the importance of the issues that organisers face. Not only are legislations and customary rules variable from country to country, but also, in many cases, at the sub-national level, especially where the Provinces/Territories (as in Canada) or the Regions (Belgium) or States/Territories (Australia), or Autonomous Communities (Spain) have legislative and administrative power as far as landscape and environmental management are concerned. In some cases (Canada, Australia for sure, but most likely other countries as well), part of the land is under the jurisdiction of the “first nations”. And, of course, the relevance of environmental factors varies according to the legal status of the land used for orienteering: protected areas, public owned land, private land; and on the specific rules and laws regarding the right of access to forests and other lands suitable for orienteering.

The variety of circumstances is such that there was almost no issue that was “very important” for some Federation that was “not important” for others. Therefore, no aspect can be dismissed as irrelevant; all deserve attention and consideration.

We believe that laying out Guidelines that are universally applicable is impossible. Better to point at solutions that work in specific circumstances and leave it to the consideration of local organisers, course setters, athletes, fans whether any can inspire effective local implementations.

Possibly, the use of checklists could prove more useful; these would be lists of aspects that may (or may not) be relevant in the local circumstances; reminders, in order to avoid omitting important aspects, even if most aspects in a list might be irrelevant.

An important aspect on which we would like to draw the attention of Federations, at least those that have a team (commission, committee, working group) in charge of environmental issues, is the need to measure the various impacts of orienteering events on the environment with reliable, transparent, and scientifically valid methods. That would facilitate the dialogue with other stakeholders, such as environmental Authorities, managers of protected areas, NGOs. Measuring impacts is also the first necessary step toward any improvement. Peter Drucker, the management guru, said “What you can’t measure you can’t manage”.

Two very clear requests from the National Federations are: a) produce or collect, if already available, scientific evidence on the real impact of orienteering on the natural environment; b) share experiences and written materials developed by individual Federations that may be used in other countries. The first request is very relevant, as most of the documents already available lack the scientific credibility offered by the “peer reviewing” process that is a standard in scientific communication. The second point is easier to address, as an impressive number of handbooks, educational material, and guidelines has been produced, in particular by the Federations with a long history and higher numbers of athletes and amateurs. We expect that translations into English or other languages would be authorized free of charge, provided that the Authors and issuing Federation are duly acknowledged. That would be a great service to the Orienteering community.

Annex 1: Questionnaire used in the survey



INTERNATIONAL ORIENTEERING FEDERATION

2 November 2021

Dear Member Federation,

The IOF Environment and Sustainability Commission (ESC) has prepared a survey to be conducted among member federations on the relevance of environmental issues and environment-related relationships with stakeholders.

A similar survey was conducted in 2011, and its importance has only increased now, taking into account the changes in environment and in attitudes towards it, as well as new challenges faced by local communities, competition organisers and athletes. The new survey includes mostly the same questions as those posed in 2011 in order to evaluate trends and emerging issues.

The survey is aimed at establishing areas of priority for the Commission in the coming years in preparing guidelines for the environmentally friendly conduct of orienteering events.

The questionnaire touches different aspects that may require competences of more than one person in your Federation; we therefore enclose a PDF file with the questions so that you may share it with other experts. The reply, however, should be only one representing the position of the Federation.

An on-line form has been prepared and can be accessed at: <https://forms.gle/wh9KAFdgJ3rAo8k87>.

Should you be unable to use it, please feel free to fill in the PDF and send a scanned version to stefano@bisoffi.it.

We would appreciate it very much if you could complete and submit the questionnaire by 15 December 2021.

Thank you and kind regards,

Stefano Bisoffi
Chairperson

IOF Environment and Sustainability Commission

Email address * _____

IOF member federation* _____

Name of the respondent *

Position of the respondent * _____

☐ – multiple choice

– single choice

* – mandatory questions

1.1. Importance of different environmental aspects *

(How could you assess the importance of the following environmental aspects of orienteering in your country)

	not important	somewhat important	important	very important
Trampling of vegetation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disturbance of mammals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disturbance of birds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Waste	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Disturbance of local inhabitants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Wastewater treat- ment (toilets, showers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traffic and its CO2- emissions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other aspects im- portant for your country (to be speci- fied in item 1.2.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

1.2. Importance of different environmental aspects (comments)

2.1. National environmental legislation related to orienteering *

- ☐ Nature conservation
- ☐ Hunting
- ☐ Use of private/public owned land
- ☐ Waste management
- ☐ Wastewater management
- ☐ Noise
- ☐ Traffic
- ☐ Arrangement of catering services (hygienic and epidemiological requirements)
- ☐ Safety (fire safety, first-aid, access to emergency vehicles, etc.)
- ☐ Use of motor vehicles in the terrain
- ☐ Use of private roads
- ☐ Other areas of legislation (to be specified in item 2.2.)

2.2. National environmental legislation related to orienteering (comments)

3.1. Permissions required for organizing an orienteering competition *

- ☐ Permission from landowners
- ☐ Permission from environmental authorities
- ☐ from hunters
- ☐ Permission from local police authorities
- ☐ Permission from the health authorities
- ☐ Others (to be specified in item 3.2.):

3.2. Permissions required for organizing an orienteering competition (comments)

4.1. Cooperation with stakeholders *

	Infor- mation in ad- vance	Dis- cuss prob- lems	Infor- mal permis- sion	Writ- ten no- tice	Repre- senta- tives at competi- tions	No coop- era- tion
Private landowners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public landowners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hunters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental authorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and safety authorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmentalists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local inhabitants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others (to be specified in item 4.2.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.2. Cooperation with stakeholders (comments)

5.1. Environmental conflicts during the past 5 years *

	none	some	many
Conflicts with landowners on land access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Orienteering and the Environment

Conflicts with landowners on damage to property (fields, trees, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with landowners on disturbance of nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with hunters on disturbance of animals or hunting	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with environmental authorities on the use of conservation areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with environmental authorities on disturbance of nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with environmentalists on disturbance of nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conflicts with local inhabitants on disturbance caused by an event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other types of conflicts (to be specified in item 5.2.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5.2. Environmental conflicts during the past 5 years (comments)

6.1. Federation's environmental management *

- | | |
|--------------------------|---|
| <input type="checkbox"/> | Environmental issues in the federation strategy |
| <input type="checkbox"/> | Annual development targets for environmental issues |
| <input type="checkbox"/> | Environmental person in charge in the federation |
| <input type="checkbox"/> | Environmental workgroup in the federation |
| <input type="checkbox"/> | National environmental guidelines have been produced for the organization of orienteering events |
| <input type="checkbox"/> | Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers |
| <input type="checkbox"/> | Environmental guidelines or other supporting material has been produced for club activities |
| <input type="checkbox"/> | Environmental instruction material has been produced for youth orienteering activities |
| <input type="checkbox"/> | Environmental instruction material has been produced for recreational orienteering activities |

-
- ☐ Environmental issues have been integrated in training of course setters and event organisers
-
- ☐ Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers)
-
- ☐ There is a possibility to apply for an environmental certificate for a competition or a club (the certificate can be given by other national organizations)
-
- ☐ Other measures (to be specified in item 6.2.)
-

6.2. Federation's environmental management (comments)

7.1. Are you aware of scientific research studies conducted in your country with regard to orienteering's impact on the environment? *

- ☐ Yes
- ☐ No

7.2. If your answer is Yes in item 7.1., give the web link or the name of the author and the name of scientific paper with scientific research studies on orienteering's environmental impacts conducted in your country.

(e.g. impact on vegetation, mammals or birds; CO₂-emissions of traffic, material or energy consumption, wastewater discharge, waste production, etc.)

8.1. Is there any experience in your country of using the green image of orienteering in the marketing of this sport ... *

	Yes	No
among sponsors?	<input type="radio"/>	<input type="radio"/>
among new amateurs?	<input type="radio"/>	<input type="radio"/>

8.2. Use of orienteering's green image for marketing the sport (comments)

Have you used orienteering's green image as an argument when trying to get sponsors for your national federation or large orienteering events? What is your perception of the green image as a selling argument? Have you used orienteering's green image for marketing our sport to new amateurs? In what way?

9.1. Needs for environmental assistance from the IOF *

- ☐ Scientific information on orienteering's impact on nature and the environment
 - ☐ Assistance in the land use or other environmental issues
 - ☐ Environmental guidelines for the IOF events
 - ☐ International Environmental Charter for orienteering
-

9.2. Needs for environmental assistance from the IOF (comments)

10.1. How does the access to land for orienteering within your country look like in the next 5 years? *

- ☐ Will remain the same
 - ☐ Will be more complicated, but not significantly
 - ☐ Will be more complicated
-

10.2. How does the access to land for orienteering within your country look like in the next 5 years? Comments (trends, problems, planned activities)

11. What support do you need from the IOF Environment and Sustainability Commission?

12. Any other comments

Annex 2: Answers of the responding countries/federations

QUESTION 1: Importance of different environmental aspects

How would you assess the importance of the following environmental aspects of orienteering in your country (i.e., what aspects are important from the viewpoint of the public conception of orienteering)?

NATIONAL FEDERATION	Trampling of vegetation	Disturbance of mammals	Disturbance of birds	Waste	Use of materials	Use of energy	Disturbance of local inhabitants	Wastewater treatment	Traffic and its CO2-emissions
Singapore	Very important	Somewhat important	Somewhat important	Very important	Very important	Important	Important	Not important	Somewhat important
Russia	Somewhat important	Not important	Not important	Important	Important	Important	Somewhat important	Important	Important
Netherlands	Very important	Very important	Very important	Not important	Not important	Not important	Somewhat important	Somewhat important	Important
Switzerland	Somewhat important	Not important	Somewhat important	Not important	Not important	Not important	Somewhat important	Important	Important
Denmark	Not important	Somewhat important	Important	Very important	Somewhat important	Not important	Somewhat important	Very important	Not important
Canada	Very important	Very important	Very important	Very important	Very important	Very important	Very important	Very important	Very important
Austria	Somewhat important	Important	Not important	Important	Somewhat important	Not important	Somewhat important	Not important	Important
Australia	Somewhat important	Somewhat important	Somewhat important	Not important	Not important	Not important	Somewhat important	Not important	Somewhat important
Belgium	Important	Important	Somewhat important	Somewhat important	Somewhat important	Somewhat important	Not important	Not important	Not important
Hungary	Somewhat important	Important	Very important	Somewhat important	Not important	Not important	Not important	Somewhat important	Somewhat important
Sweden	Important	Very important	Somewhat important	Important	Somewhat important	Important	Somewhat important	Important	Important
Italy	Somewhat important	Important	Important	Important	Somewhat important	Somewhat important	Important	Somewhat important	Important
Brazil	Not important	Very important	Important	Very important	Important	Very important	Very important	Important	Somewhat important
Belarus	Important	Important	Somewhat important	Important	Somewhat important	Somewhat important	Important	Important	Somewhat important
Great Britain	Very important	Important	Very important	Important	Important	Important	Somewhat important	Somewhat important	Very important
Czech Republic	Somewhat important	Important	Important	Very important	Not important	Not important	Important	Important	Not important

NATIONAL FEDERATION	Trampling of vegetation	Disturbance of mammals	Disturbance of birds	Waste	Use of materials	Use of energy	Disturbance of local inhabitants	Wastewater treatment	Traffic and its CO2-emissions
Japan	Somewhat important	Somewhat important	Somewhat important	Not important	Not important	Not important	Somewhat important	Not important	Not important
Latvia	Somewhat important	Somewhat important	Somewhat important	Important	Important	Somewhat important	Somewhat important	Somewhat important	Somewhat important
Chinese Taipei	Somewhat important	Somewhat important	Somewhat important	Important	Somewhat important	Important	Somewhat important	Somewhat important	Somewhat important
Estonia	Very important	Somewhat important	Very important	Important	Somewhat important	Not important	Important	Somewhat important	Somewhat important
Turkey	Important	Important	Important	Very important	Important	Important	Somewhat important	Important	Somewhat important
Portugal	Important	Important	Important	Very important	Somewhat important	Somewhat important	Somewhat important	Important	Somewhat important
Croatia	Somewhat important	Somewhat important	Not important	Very important	Somewhat important	Somewhat important	Important	Very important	Somewhat important
Bulgaria	Important	Important	Important	Very important	Somewhat important	Important	Somewhat important	Very important	Very important
Spain	Somewhat important	Somewhat important	Important	Important	Somewhat important	Somewhat important	Not important	Not important	Important
Israel	Important	Not important	Not important	Important	Somewhat important	Somewhat important	Important	Important	Not important
Finland	Somewhat important	Somewhat important	Somewhat important	Somewhat important	Somewhat important	Not important	Important	Somewhat important	Somewhat important
Norway	Somewhat important - Very important (*)	Somewhat important - Very important (*)	Somewhat important - Very important (*)	Important	Somewhat important	Somewhat important	Somewhat important	Somewhat important	Somewhat important

Question 1. Importance of different environmental aspects (comments)

Singapore	Impact of orienteers moving across open land where possibility of grass dying.
Netherlands	The implementation of natura 2000 prohibits off-road access to previously used terrains. Transition of former army terrains to more general government ownership also limits access. The implementation of mandatory impact assessment studies (€2000 on average, should be a recent study) in license requirements makes organizing an event practically impossible.
Canada	We have a large variety of environments, different animals and plants are affected in different areas. Reptiles and amphibians are missing from the list above.
Austria	Cultivated Areas in the woods or reforestation

Australia	Much of the natural environment used for orienteering is relatively dry and fairly robust when it comes to trampling. It is rare to see orienteering damage to the environment a month or more after an event. There can be areas that are environmentally sensitive where landowners concerned with nature conservation forbid us to enter. These include sphagnum bogs, mangroves, recently burnt terrain and areas with rare species. On occasion we need to keep courses away from birds during breeding season – including on one map because the breeding birds attack people. There is also concern that orienteers can spread seeds of plants regarded as weeds, water moulds (<i>Phytophthora cinnamomi</i>) and fungal diseases (Myrtle rust) that can damage the environment. Another issue which sometimes arises is potential disturbance to sites of indigenous (at to a lesser extent, European) cultural significance. In practice, few of these sites are likely to be sensitive to disturbance but, because of their legislative protection, some managers are nervous about them.
Sweden	1, Impact on/from other activities in nature. 2, Traffic and its CO2-emissions might become increasingly important and influence our travel habits to trainings- and competition events.
Italy	Damages to meadows in competition arena and parking places (especially in wet weather)
Brazil	Bees and wasps are important for course setters. We prevent placing controls near them. Not only for security reasons for the runners, but we consider that wasp nests may be destroyed by runners. In the past, the common way to deal with bees was to remove them from the area.
Great Britain	Event merchandise and commemorative T-Shirts
Portugal	Forest and rural fire safety
Spain	Choice of parking area. Interaction with other users (hunters, hikers, mountain bike,...).
Finland	Finland is relatively large country with huge amount of forests suitable for orienteering. Therefore majority of the answer above are "somewhat" since we are able to avoid too heavy use of forests.
Norway	(*) Importance depending on the sustainability status of the species

QUESTION 2: National environmental legislation related to orienteering

What issues stated in your national environment related legislation have to be taken into account when organizing orienteering competitions in your country?

NATIONAL FED-ERATION	Nature conserva-tion	Hunting	Use of pri-vate/public owned land	Noise	Traffic	Arrangement of catering ser-vices (hygienic requirements)	Use of private roads	Waste man-agement	Wastewater management	Safety (fire safety, first- aid, access to emer-gency vehicles, etc.)	Use of motor vehicles in the terrain
Singapore	x	-	-	-	-	x	-	-	-	-	-
Russia	x	-	x	-	-	x	-	x	-	x	x
Netherlands	x	-	x	-	-	x	-	-	-	-	-
Switzerland	x	x	x	x	x	x	x	x	x	x	x
Denmark	x	x	x	-	-	-	-	-	-	-	x
Canada	x	x	x	-	-	-	x	-	-	-	x
Austria	x	x	x	-	x	x	x	x	-	x	x
Australia	x	-	x	x	x	x	-	-	-	x	x
Belgium	x	x	x	x	-	x	-	-	-	-	x
Hungary	x	x	x	x	-	-	-	-	-	x	x
Sweden	x	x	x	-	-	x	x	x	x	-	x
Italy	x	x	x	-	-	x	-	x	-	x	x
Brazil	x	x	x	-	x	x	-	-	x	x	-
Belarus	x	-	x	-	-	x	-	x	-	x	x
Great Britain	x	x	x	-	-	-	-	-	-	-	-
Czech Republic	x	x	x	x	x	x	x	x	x	x	x
Japan	x	x	x	x	x	x	x	x	x	x	x
Latvia	x	x	x	-	x	x	-	x	-	x	x

NATIONAL FED-ERATION	Nature conserva-tion	Hunting	Use of pri-vate/public owned land	Noise	Traffic	Arrangementof catering ser-vices (hygienic requirements)	Use of private roads	Waste man-agement	Wastewater management	Safety (fire safety, first- aid, access to emer-gency vehicles, etc.)	Use of motor vehicles in the terrain
Chinese Taipei	x	-	x	x	-	x	-	-	-	-	-
Estonia	x	-	x	-	-	-	-	-	-	x	x
Turkey	x	-	-	x	-	x	-	x	-	x	-
Portugal	x	x	x	x	x	-	x	x	x	x	-
Croatia	-	x	-	-	-	x	-	-	-	x	-
Bulgaria	x	x	x	x	x	x	-	x	x	x	x
Spain	x	x	x	x	x	x	-	-	-	x	x
Israel	x	-	x	-	-	-	-	-	-	x	-
Finland	x	x	x	-	x	x	-	x	x	x	-
Norway	x	x	x	x	x	x	-	x	-	x	x

Question 2. National environmental legislation related to orienteering (comments)

Canada	A lot of the above issues have Provincial and Territorial jurisdiction. Other areas missing from the above list are wildlife, plant species at risk
Australia	Most environmental legislation in Australia is not national, but is governed by the six State Governments and the two Territory Governments. There are also some small areas of land that are owned by the national (Commonwealth) Government. Some government regulations concerning land use mention orienteering and whether orienteering can be conducted in, for example, a particular area of forest. More generally, government and private landowners control orienteering under rules that apply to outdoor sport or events (e.g. rock concerts). Some potential orienteering areas are protected by legislation relating to wilderness or environmental significant. This legislation can ban all active recreation or organised recreation such as orienteering.
Belgium	Catering services (only due to the actual pandemic situation). Legislation often not specifically related to orienteering but more to outdoor sports in a natural environment.
Sweden	Police permission to reduce speed limits on public roads

Japan	The answer depend on how "related to orienteering" means. If it means that part of orienteering activities should be followed to the legislations mentioned, the answers are mostly yes and if it means that the legislations refer to orienteering, the answers are no.
Spain	There is no specific legislation for the sport of orienteering, but reference is made to sporting events in nature in the marked aspects. Natural areas in Spain are regulated differently depending on their protection status. In addition, due to the fact that autonomous communities are responsible for the environment, there are many different criteria.
Norway	The individual right to access land (Friluftsløven). (*) Nature conservation: Not conservation, but sustainability – according to Environmental diversity act (Naturmangfoldloven).

QUESTION 3: Permissions required for organizing an orienteering competition

What permissions must the organisers of an orienteering competition have in your country?

NATIONAL FEDERATION	Permission from land-owners	Permission from environmental authorities	Permission from hunters	Permission from local police authorities	Permission from the health authorities	Others (specify)
Singapore	X	-	-	-	-	Park authorities
Russia	X	X	X	X	X	
Netherlands	X	X	-	-	-	Municipal authorities
Switzerland	X	X	X	X	X	
Denmark	X	X	X	X	-	
Canada	X	X	-	-	-	Local/ municipal authority, First Nations territorial land
Austria	X	X	-	X	X	
Australia	X	X	-	-	-	
Belgium	X	X	X	X	-	
Hungary	X	-	X	-	-	Nature Conservation Office, Local government, Forestry Office

NATIONAL FEDERATION	Permission from land-owners	Permission from environmental authorities	Permission from hunters	Permission from local police authorities	Permission from the health authorities	Others (specify)
Sweden	X	X	X	-	-	
Italy	X	X	-	X	X	
Brazil	X	-	-	X		
Belarus	X	X	-	X	X	
Great Britain	X	-	-	-	X	
Czech Republic	X	X	X	X	-	
Japan	X	-	-	-	-	
Latvia	X	X	X	-	-	
Chinese Taipei	X	-	-	X	X	
Estonia	X	X	-	X	-	Local authorities
Turkey	X	X	-	X	X	
Portugal	X	X	-	X	X	
Croatia	-	-	X	X		
Bulgaria	X	X	X	X	X	
Spain	X	X	-	-	X	City Councils, Government Delegation for the participation of police, Civil Protection, Fire Extinguishing Consortium
Israel	X	X	-	-	-	
Finland	X	-	X	X	-	
Norway	-	-	-	-	-	Permission may be needed under certain conditions, e.g., when arranging in a nature reserve

Question 3. Permissions required for organizing an orienteering competition (comments)

Singapore	Park authorities
Netherlands	Municipal authorities
Canada	Local/ municipal authority permissions, First Nations territorial land permissions
Australia	For events with a government landowner and more than 20 to 40 competitors, permission from the landowner required. Sometimes we only obtain permission from the landowner of the finish area. When the terrain crossed is privately owned permission would always be obtained. If a road needs to be closed to traffic, permission from the government needs to be obtained. This is an expensive thing to do, so we very rarely close roads.
Belgium	Especially in the southern part of the country (Wallonia), permission from hunters is more important while in the northern part (Flanders) getting the permission from the environmental authorities becomes more difficult.
Hungary	Permission from National Parks (Nature Conservation Office). Permission from the local government, Permission from forestry.
Sweden	The Swedish Orienteering Federation consider that placing control flags and running in the terrain is done based on the rights of common access.
Italy	The most demanding requirements regard safety issues, as an orienteering event is treated as any other event with public access: organisers have to provide emergency plans for possible fires, floods, etc. with evacuation plans, etc. that are tailored to events held within a limited area but not for disperse events like orienteering races.
Japan	Permission from Environmental authorities depends on the area (e.g., national park). We do not need permission but we need to negotiate hunters. In some area, we are instructed not to organise orienteering because it is the time of hunting.
Estonia	Permission from local authorities to organise a public event is also needed. Agreements (not permissions) with hunters; health authorities: depending on Covid situation and current restrictions. Permissions depend also on type (size) and the location of o-event. E.g. the permission from environmental authorities is needed if the event takes place on nature protection area; permission from landowners is not needed to run in forest but it is needed if setting up the competition centre, temporary parking lots etc. to private land.
Spain	Depending on the size of the competition and the venue, authorizations may also be required from City Councils, Government Delegation for the participation of police, Civil Protection, Fire Extinguishing Consortium or competent departments for the celebration of public or sporting events.
Norway	Required is understood as required for all activities. Permission may be needed under certain conditions, e.g. when arranging in a nature reserve.

QUESTION 4: Cooperation with stakeholders

What kind of cooperation is usually undertaken with the stakeholders in the arrangements of orienteering competitions in your country?

NATIONAL FEDERATION	Private landowners	Public landowners	Hunters	Environmental authorities	Health and safety authorities	Environmentalists	Local inhabitants
Singapore	Advance info	Advance info	No cooperation	Representative	Representative	No cooperation	Representative
Russia	Written notice	Written notice	Written notice	Written notice	Written notice	No cooperation	No cooperation
Netherlands	Written notice	Written notice	No cooperation	Written notice	Written notice	No cooperation	Written notice
Switzerland	Informal permission, Representative	Written notice, Representative	Written notice, Representative	Written notice, Representative	Written notice, Representative	Advance info	Advance info, Discuss problems
Denmark	Written notice	Informal permission	Written notice	Advance info	Discuss problems	Discuss problems	Informal permission
Canada	Advance info, Discuss problems, Representative	Advance info, Discuss problems, Written notice	No cooperation	Discuss problems	Advance info, Representative	No cooperation	Advance info, Discuss problems, Informal permission, Written notice, Representative
Austria	Advance info, Discuss problems, Informal permission, Written notice	Advance info, Discuss problems, Written notice	Advance info, Discuss problems, Informal permission, Written notice	Advance info, Discuss problems, Written notice	Advance info, Discuss problems, Written notice	No cooperation	Advance info
Australia	Advance info, Discuss problems, Informal permission	Advance info, Discuss problems, Written notice	No cooperation	Advance info, Discuss problems, Written notice	No cooperation	Discuss problems	Discuss problems
Belgium	Informal permission, No cooperation	Written notice	Advance info, Discuss problems, Informal permission, No cooperation	Advance info, Discuss problems, Written notice	No cooperation	No cooperation	Advance info, No cooperation
Hungary	Written notice	Advance info	Written notice	No cooperation	Advance info	No cooperation	Advance info
Sweden	Advance info, Discuss problems, Informal permission	Advance info, Discuss problems, Informal permission	Advance info, Discuss problems, Informal permission	Advance info, Discuss problems, Informal permission, Written notice	Advance info, Discuss problems, Written notice	Advance info, Discuss problems	Advance info
Italy	Discuss problems, Informal permission	Discuss problems, Written notice	Discuss problems	Written notice	Written notice	Discuss problems	Advance info

NATIONAL FEDERATION	Private landowners	Public landowners	Hunters	Environmental authorities	Health and safety authorities	Environmentalists	Local inhabitants
Brazil	Written notice	Written notice	No cooperation	Advance info	Advance info	No cooperation	Advance info
Belarus	Written notice	Written notice	Informal permission	Written notice	Representative	No cooperation	No cooperation
Great Britain	Advance info, Discuss problems, Written notice	Advance info, Discuss problems, Written notice	No cooperation	No cooperation	Advance info	No cooperation	Advance info
Czech Republic	Advance info, Discuss problems, Written notice	Advance info, Discuss problems, Written notice	Advance info	Advance info, Discuss problems, Representative	Advance info	Discuss problems	Advance info
Japan	Advance info	Advance info	Advance info	No cooperation	No cooperation	No cooperation	Advance info
Latvia	Advance info	Written notice	Advance info	Written notice	Written notice	Advance info	Advance info
Chinese Taipei	Informal permission	Advance info, Informal permission	No cooperation	Discuss problems	Advance info, Discuss problems	Advance info	Advance info
Estonia	Advance info, Discuss problems, Informal permission, Written notice, Representative	Advance info, Discuss problems, Written notice	Advance info, Discuss problems	Advance info, Discuss problems, Written notice	Discuss problems, Written notice	No cooperation	Advance info, Discuss problems, Representative
Turkey	Informal permission	Written notice	Informal permission	Written notice	Written notice	Written notice	Written notice
Portugal	Advance info, Discuss problems, Written notice, Representative	Advance info, Discuss problems, Written notice	Advance info, Discuss problems	Advance info, Discuss problems, Written notice	Advance info, Discuss problems, Written notice	No cooperation	Advance info, Discuss problems, Informal permission, Representative
Croatia	No cooperation	No cooperation	Advance info, Informal permission, Written notice	No cooperation	Advance info, Informal permission, Representative	No cooperation	Advance info, No cooperation
Bulgaria	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice	Advance info, Informal permission, Written notice
Spain	Informal permission	Informal permission, Written notice, Representative	Written notice	Written notice, Representative	Representative	No cooperation	Representative
Israel	No cooperation	Advance info, Discuss problems, Informal permission	No cooperation	Advance info, Written notice	No cooperation	No cooperation	Advance info, Discuss problems, Informal permission
Finland	Information in advance, Written notice,	Information in advance, Written notice,	Informal permission	Information in advance, Discuss problems,	Information in advance, Written notice	No cooperation	No cooperation

NATIONAL FEDERATION	Private landowners	Public landowners	Hunters	Environmental authorities	Health and safety authorities	Environmentalists	Local inhabitants
	Representative	Representative		Written notice			
Norway	Information in advance	Information in advance	Information in advance	Information in advance (when nature reserves are used)	No cooperation	Information in advance	No cooperation

Question 4. Cooperation with stakeholders (comments)

Canada	First Nations, mountain bike clubs and other users of the land- contact depends on circumstances
Austria	Mayor wants to be informed and often is happy to be invited to the prizegiving ceremony.
Australia	The quality of our relationships with landowners depends very much on the landowner's knowledge of orienteering. If the person we deal with does not know anything about orienteering and does not want the inconvenience with dealing with us relationships can be difficult. That is, they decline permission and it is difficult to change this. If the person we deal with knows about orienteering or has orienteered, the relationship is usually very good. Sometimes when the person we deal with resigns, the relationship can change from friendly to difficult (and vice versa). Private persons who own land sometimes forget that they have given non-written approval. At some events, we have had to provide signs indicating that an event is taking place and that any concerns from other users of the area should be directed to a specific organiser (phone contact provided).
Belgium	Environmentalists will almost never give us permission. Due to GDPR, we rarely know who is the private owner of a small piece of forest (some maps have dozens of small private land owners). We often operate in a grey zone.
Hungary	Nature Conservation Office and Forestry.
Sweden	1, Information to and dialogue with other organizations holding activities in the same area. 2, In areas for military use it is a bit more difficult to get permission.
Italy	Frequent information to local food and goods producers that may have an interest in placing vending stalls in the arena
Brazil	We consider private landowners one of the most important parts when organizing a competition. It is a tradition to discuss with them in advance and

Orienteering and the Environment

	explain what orienteering is and its benefits to the participants. It is rare to meet somebody who do not help and offer free access to the land.
Estonia	Health and safety authorities: deeper consultations/cooperation by World Champs, not on weekly recreational events.
Spain	Private entities that support the organization of the event.
Norway	The principle is information in advance according to national agreement. Permissions are needed when required by legislation.

QUESTION 5: Environmental conflicts during the past 5 years

What kind of environmental conflicts have occurred in connection with the organisation of orienteering activities in your country (what is your federation's perception of the occurrence of the conflicts)?

NATIONAL FEDERATION	landowners on land access	landowners on damage to property	landowners on disturbance of nature	hunters on disturbance of animals or hunting	environmental authorities on the use of conservation areas	environmental authorities on disturbance of nature	environmentalists on disturbance of nature	local inhabitants on the disturbance caused by an event
Singapore	some	none	many	none	some	some	many	some
Russia	none	none	none	none	none	none	none	none
Netherlands	some	none	none	none	many	many	none	none
Switzerland	some	some	some	some	some	some	some	some
Denmark	many	none	none	many	some	some	many	none
Canada	some	none	none	none	some	some	some	some
Austria	many	some	none	many	none	none	none	some
Australia	many	none	none	none	some	some	some	some
Belgium	some	none	some	many	some	some	none	none
Hungary	some	none	some	many	many	many	many	some
Sweden	some	some	some	some	many	none	none	none
Italy	some	none	some	some	some	some	some	some
Brazil	some	some	some	none	none	none	none	some
Belarus	none	none	none	none	none	none	none	some
Great Britain	many	some	many	none	many	many	some	some
Czech Republic	many	none	none	some	none	none	none	some
Japan	some	none	none	some	none	none	some	some

NATIONAL FEDERATION	landowners on land access	landowners on damage to property	landowners on disturbance of nature	hunters on disturbance of animals or hunting	environmental authorities on the use of conservation areas	environmental authorities on disturbance of nature	environmentalists on disturbance of nature	local inhabitants on the disturbance caused by an event
Latvia	none	none	none	none	none	none	none	none
Chinese Taipei	some	none	none	none	none	none	none	none
Estonia	some	some	none	none	some	none	none	some
Turkey	some	some	some	none	some	some	none	none
Portugal	some	none	none	some	many	none	none	none
Croatia	none	none	none	none	none	none	none	none
Bulgaria	none	none	none	none	none	none	none	none
Spain	some	some	some	some	some	many	none	some
Israel	none	none	none	none	none	some	none	some
Finland	some	some	none	none	none	none	none	many
Norway	some	some	some	some	none	none	none	none

Question 5. Environmental conflicts during the past 5 years (comments)

Australia	<ul style="list-style-type: none"> An illegal shooter shot a sheep which was 20m away from one of our mappers. Both the landowner and police were notified. One local government landowner banned orienteering from all of its forest areas (including events that occurred only on tracks). The Environment Manager decided that any orienteering would cause damage to the forest. This was, to an extent, resolved. One local government landowner banned orienteering after an event where a small branch on a rare species of tree was damaged. The landowner appeared to be looking for any excuse to prohibit orienteering. Some orienteering areas are lost to orienteering because they are divided into small landholdings. There are too many landowners to approach for permission and they tend to refuse permission.
Belgium	Conflicts with hunters rare in Flanders but more an issue in Wallonia.
Italy	The response should in fact vary according to the different regions and to the local power of other stakeholders (e.g., hunters' organizations, environmental NGOs)

Spain	Most conflicts would be avoided with more dialogue between the parties (organiser - owner - public manager).
Finland	Conflicts with local inhabitants may occur mainly in urban area (sprints).
Norway	What is the definition of a conflict?

QUESTION 6: Federation's environmental management

What kind of measures has your national federation taken for the management of environmental issues?

Question 6.1. Federation's environmental management

6.1.1 Environmental issues in the federation strategy

6.1.2 Annual development targets for environmental issues

6.1.3 Environmental person in charge in the federation

6.1.4 Environmental workgroup in the federation

6.1.5 National environmental guidelines have been produced for the organization of orienteering events

6.1.6 Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers

6.1.7 Environmental guidelines or other supporting material has been produced for club activities

6.1.8 Environmental instruction material has been produced for youth orienteering activities

6.1.9 Environmental instruction material has been produced for recreational orienteering activities

6.1.10 Environmental issues have been integrated in training of course setters and event organisers

6.1.11 Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers)

6.1.12 There is a possibility to apply for an environmental certificate for a competition or a club (the certificate can be given by other

national organizations)

6.1.13 Other measures (to be specified in item 6.2.)

IOF member federation	6.1.1	6.1.2	6.1.3	6.1.4	6.1.5	6.1.6	6.1.7	6.1.8	6.1.9	6.1.10	6.1.11	6.1.12	6.1.13
Singapore			■							■			
Russia					■								
Netherlands													■
Switzerland	■	■	■	■	■	■	■	■	■	■	■	■	
Denmark	■	■	■			■	■			■			
Canada	■					■							■
Austria												■	
Australia	■				■	■				■			
Belgium	■		■	■		■				■			
Hungary	■	■	■	■			■						
Sweden	■		■		■	■	■	■	■	■			■
Italy				■	■		■			■			
Brazil	■									■			
Belarus			■										
Great Britain			■	■			■						
Czech Republic	■			■									
Japan													■

IOF member federation	6.1.1	6.1.2	6.1.3	6.1.4	6.1.5	6.1.6	6.1.7	6.1.8	6.1.9	6.1.10	6.1.11	6.1.12	6.1.13
Latvia	■		■	■	■		■			■			
Chinese Taipei					■		■		■				
Estonia	■	■	■	■	■	■			■	■	■		
Turkey	■	■			■		■		■				
Portugal	■				■		■			■			
Croatia	■		■										
Bulgaria	■		■		■	■	■	■	■	■	■	■	
Spain			■									■	■
Israel										■			
Finland	■	■		■	■	■			■		■		■
Norway	■		■	■	■	■	■			■			

Singapore	Environmental person in charge in the federation, Environmental issues have been integrated in training of course setters and event organisers
Russia	National environmental guidelines have been produced for the organization of orienteering events
Netherlands	Other measures (to be specified in item 6.2.)
Switzerland	Environmental issues in the federation strategy, Annual development targets for environmental issues, Environmental person in charge in the federation, Environmental workgroup in the federation, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental guidelines or other supporting material has been produced for club activities, Environmental instruction material has been produced for youth orienteering activities, Environmental instruction material has been produced for recreational orienteering activities, Environmental issues have been integrated in training of course setters and event organisers, Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers), There is a possibility to apply for an environmental certificate for a competition or a

	club (the certificate can be given by other national organizations)
Denmark	Environmental issues in the federation strategy, Annual development targets for environmental issues, Environmental person in charge in the federation, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental guidelines or other supporting material has been produced for club activities, Environmental issues have been integrated in training of course setters and event organisers
Canada	Environmental issues in the federation strategy, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Other measures (to be specified in item 6.2.)
Austria	There is a possibility to apply for an environmental certificate for a competition or a club (the certificate can be given by other national organizations)
Australia	Environmental issues in the federation strategy, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental issues have been integrated in training of course setters and event organisers
Belgium	Environmental issues in the federation strategy, Environmental person in charge in the federation, Environmental workgroup in the federation, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental issues have been integrated in training of course setters and event organisers
Hungary	Environmental issues in the federation strategy, Annual development targets for environmental issues, Environmental person in charge in the federation, Environmental workgroup in the federation, Environmental guidelines or other supporting material has been produced for club activities
Sweden	Environmental issues in the federation strategy, Environmental person in charge in the federation, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental guidelines or other supporting material has been produced for club activities, Environmental instruction material has been produced for youth orienteering activities, Environmental instruction material has been produced for recreational orienteering activities, Environmental issues have been integrated in training of course setters and event organisers, Other measures (to be specified in item 6.2.)
Italy	Environmental workgroup in the federation, National environmental guidelines have been produced for the organization of orienteering events, Environmental guidelines or other supporting material has been produced for club activities, Environmental issues have been integrated in training of course setters and event organisers
Brazil	Environmental issues in the federation strategy, Environmental issues have been integrated in training of course setters and event organisers
Belarus	Environmental person in charge in the federation
Great Britain	Environmental person in charge in the federation, Environmental workgroup in the federation, Environmental guidelines or other supporting material

	has been produced for club activities
Czech Republic	Environmental issues in the federation strategy, Environmental workgroup in the federation
Japan	Other measures (to be specified in item 6.2.)
Latvia	Environmental issues in the federation strategy, Environmental person in charge in the federation, Environmental workgroup in the federation, National environmental guidelines have been produced for the organization of orienteering events, Environmental guidelines or other supporting material has been produced for club activities, Environmental issues have been integrated in training of course setters and event organisers
Chinese Taipei	National environmental guidelines have been produced for the organization of orienteering events, Environmental guidelines or other supporting material has been produced for club activities, Environmental instruction material has been produced for recreational orienteering activities
Estonia	Environmental issues in the federation strategy, Annual development targets for environmental issues, Environmental person in charge in the federation, Environmental workgroup in the federation, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental instruction material has been produced for recreational orienteering activities, Environmental issues have been integrated in training of course setters and event organisers, Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers)
Turkey	Environmental issues in the federation strategy, Annual development targets for environmental issues, National environmental guidelines have been produced for the organization of orienteering events, Environmental guidelines or other supporting material has been produced for club activities, Environmental instruction material has been produced for recreational orienteering activities
Portugal	Environmental issues in the federation strategy, National environmental guidelines have been produced for the organization of orienteering events, Environmental guidelines or other supporting material has been produced for club activities, Environmental issues have been integrated in training of course setters and event organisers
Croatia	Environmental issues in the federation strategy, Environmental person in charge in the federation
Bulgaria	Environmental issues in the federation strategy, Environmental person in charge in the federation, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental guidelines or other supporting material has been produced for club activities, Environmental instruction material has been produced for youth orienteering activities, Environmental instruction material has been produced for recreational orienteering activities, Environmental issues have been integrated in training of course setters and event organisers, Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers), There is a possibility to apply for an environmental certificate for a competition or a club (the certificate can be given by other national organizations)

Spain	Environmental person in charge in the federation, There is a possibility to apply for an environmental certificate for a competition or a club (the certificate can be given by other national organizations), Other measures (to be specified in item 6.2.)
Israel	Environmental issues have been integrated in training of course setters and event organisers
Finland	Environmental issues in the federation strategy, Annual development targets for environmental issues, Environmental workgroup in the federation, National environmental guidelines have been produced for the organization of orienteering events, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental instruction material has been produced for recreational orienteering activities, Environmental issues are integrated in the federation's data collection system (information gathered from clubs and event organisers), Other measures (to be specified in item 6.2.)
Norway	Environmental issues in the federation strategy, Environmental person in charge in the federation, Environmental workgroup in the federation, Scientific information of orienteering's impact on nature and the environment has been made available for the orienteering clubs and event organisers, Environmental guidelines or other supporting material has been produced for club activities, Environmental issues have been integrated in training of course setters and event organisers

Question 6.2. Federation's environmental management (comments)

Netherlands	No measures. Dealing with the authorities is left to our 5 clubs, that have informal meetings which each other.
Canada	Many of these in 6.1 in above are in progress. We would appreciate any templates you might have available
Belgium	Environmental issues for course setters as well as an environmental workgroup less integrated in the French part of the federation (Wallonia).
Hungary	I have not been in charge of environmental management for a long time, but several of those listed (which I did not mark) are among my plans. In Hungary, we want to improve the environmental rules in orienteering.
Sweden	Swedish Orienteering Federation have policy- and support documents around orienteering and the rights of common access.
Estonia	Last 2-3 years we have having a tighter co-operation with Estonian state environmental board, as well as with scientists from Estonian University of Life Sciences, studying recreational events impact on nature and environment. The guidelines for clubs and event organisers will be ready in coming weeks/months.
Spain	Federation is working in this area for reducing waste in events.

Finland	Biggest financial supporter, Ministry of Education of Culture, will ask "Environmental responsibility" program by the end of 2022. This will be now carried out. It will be relatively large document.
Norway	What is an environmental person? Do you mean a person in charge for environmental issues?

Question 7.1. Are you aware of scientific research studies conducted in your country with regard to orienteering's impact on the environment?

Singapore	No	Belgium	No	Japan	No	Spain	Yes
Russia	No	Hungary	No	Latvia	No	Israel	No
Netherlands	No	Sweden	Yes	Chinese Taipei	No	Finland	Yes
Switzerland	Yes	Italy	No	Estonia	Yes	Norway	No
Denmark	No	Brazil	No	Turkey	Yes		
Canada	Yes	Belarus	No	Portugal	Yes		
Austria	No	Great Britain	No	Croatia	No		
Australia	Yes	Czech Republic	No	Bulgaria	No		

Question 7.2. If your answer is Yes in item 7.1., give the web link or the name of the author and the name of scientific paper with scientific research studies on orienteering's environmental impacts conducted in your country

(e.g. impact on vegetation, mammals or birds; CO2-emissions of traffic, material or energy consumption, wastewater discharge, waste production, etc.)

Canada	https://prism.ucalgary.ca/bitstream/handle/1880/46902/Mendoza.pdf?sequence=1 http://classic.cascadeoc.org/sites/default/files/content/Alberta_Orienteering_Study%20exec%20summary.pdf
Australia	The Orienteering ACT website provides links to some other environmental studies. https://act.orienteeing.asn.au/resources/event-management/
Sweden	https://www.svenskorienteering.se/Arrangera/markfragor/Vetenskapligastudier/
Estonia	Ensuring the sustainable environment for organizing an orienteering event (Birgit Valdaru) https://dspace.emu.ee/xmlui/handle/10492/5003?show=full PLANNING AN ORIENTEERING TRACK ON THE EXAMPLE OF VALGA AND TARTU COUNTIES (Tonu Vahtra): https://dspace.emu.ee/xmlui/handle/10492/5012 ORIENTEERING EVENTS HELD AT PROTECTED AREAS IN ESTONIA IN 2016-2018 (Kaupo Rozenkron): https://dspace.emu.ee/xmlui/handle/10492/4998
Turkey	Yes I have info but there is No research.
Portugal	https://repositorio.ipcb.pt/handle/10400.11/1644
Spain	Oñorbe M., Benayas, J., & Faucha, M. (2017). Deporte de Orientación y Medio Ambiente. Guía orientativa para la sostenibilidad de las carreras de orientación. Federación Madrileña de Orientacion. Zurita, B., & Martínez, C. (2014). El Impacto de la Orientación en la Naturaleza. Tandem. Didáctica de la Educación Física (45), 26-31.
Finland	There has been some university studies concerning impacts of Jukola Relay, but we don't have any links or material. In fact, we have discussed in our Federation's environmental group that we should collect all the studies into same database on links. I am grateful if IOF has links in studies in other countries.

QUESTION 8: Use of orienteering's green image for marketing the sport

Have you used orienteering's green image as an argument when trying to get sponsors for your national federation or large orienteering events? What is your perception of the green image as a selling argument?

Have you used orienteering's green image for marketing our sport to new amateurs? In what way?

NATIONAL FEDERATION	a) Use of green image for getting sponsors	b) Use of green image for marketing sport to new amateurs
Singapore	Yes	No
Russia	No	No
Netherlands	No	No
Switzerland	Yes	Yes
Denmark	No	No
Canada	Yes	Yes
Austria	Yes	Yes
Australia	No	No
Belgium	No	Yes
Hungary	Yes	Yes
Sweden	Yes	No
Italy	Yes	Yes
Brazil	Yes	Yes
Belarus	No	No
Great Britain	No	No
Czech Republic	Yes	Yes
Japan	No	No
Latvia	No	No

NATIONAL FEDERATION	a) Use of green image for getting sponsors	b) Use of green image for marketing sport to new amateurs
Chinese Taipei	No	No
Estonia	Yes	Yes
Turkey	Yes	Yes
Portugal	Yes	No
Croatia	Yes	Yes
Bulgaria	No	No
Spain	Yes	Yes
Israel	No	Yes
Finland	Yes	No
Norway	Yes	Yes

Question 8.2. Use of orienteering's green image for marketing the sport (comments)

Have you used orienteering's green image as an argument when trying to get sponsors for your national federation or large orienteering events? What is your perception of the green image as a selling argument? Have you used orienteering's green image for marketing our sport to new amateurs? In what way?

Netherlands	I cannot see how orienteering can have a green image. The positive effect I see is in the happiness in the orienteers' psyche and in the physical benefits of sport on the human body. These health benefits are not related to 'green' nature effects. On nature there are only negative effects: 1. People travel relative long distances to participate in events: by car or by plane. This has significant CO2 impact. 2. Orienteers trample nature and disturb animals. It's negative impact might be very small, but you can never claim that it is a positive impact.
Switzerland	one of different points in the marketing and communication to all

Denmark	no
Canada	For grant applications the environmental aspects of the sport are highlighted. As well as for land use in conservation areas and land use permissions.
Austria	Green image is an essential argument in every event preparation and on all occasions, where our sport is presented, e.g. in schools
Belgium	Low impact sport in a natural environment.
Hungary	One of the mottos in Hungary: Orienteering is a green sport. I don't think we can say that to our races right now. However, I see the potential for us to actually say that we are green and we are trying to do everything we can to protect the environment. We use a lot of plastic right now, a lot of us go to races with cars that aren't full and we don't pay enough attention to nature, and so on. We are now working out the rules on these issues and I very much look forward to a successful year.
Sweden	The green image by Orienteering is well known by the sponsors of Swedish Orienteering. but we have to step up and work together with our sponsors environmental knowledge to keep up the reliability as a green sport.
Italy	The green image of orienteering as a sport at one with nature is appealing to a number of sponsors and among beginners that are attracted to the sport. However, the environmental aspects have never been a primary focus in the search for sponsors.
Brazil	<p>Our perception is that the green image of orienteering as a selling argument is changing over the time. Some years ago it did not have any impact in our results when negotiating with sponsors. Nowadays it seems to have a very good appeal and some company's desire to have their image linked to a "green" sport. Recently we had a project approved with Tereos Sugar and Energy Brazil. It is our biggest project in the recent years. The main purpose is to offer training in long and middle distance running and teach basic orienteering to physical education teachers.</p> <p>We also used the green image of orienteering to attract new members to our clubs. Brazil has warm weather most of the year and it is good for outdoor sports such as orienteering. The Confederation directions to our clubs is to offer initiation clinics frequently and always use the contact with nature and the need to take care of it as its flagship. All our clinics programme offer at least one hour to discuss how our modern society affects nature and how we, as orienteers, should behave not only while in the forest, but especially in our daily life.</p>
Great Britain	I've not used it but will look into it.
Estonia	Orienteering can be done everywhere, no need to build sport halls, swimming pools etc.
Turkey	I emphasize that orienteering is a sport that teaches environmental awareness and should be passed on to future generations.
Portugal	The green image of orienteering is used as an asset to convince sponsors, but is not the top argument.

Orienteering and the Environment

Croatia	Our Federation often uses orienteering's green image as a way to promote the sport because it is aware of its positive impact on human mental and physical health. Marketing it as "green" is a good way to attract attention from new people, especially through media, but we put a bigger highlight on the fact that it is held in nature, not on its low environmental impact.
Spain	Orienteering is part of the solution to the environmental problem. The green image of orienteering has been used to raise the awareness of the athlete and to make the environmental administration aware of the benefits of our sport.
Finland	"Forest is our arena". This is a new image for our sponsors. We are just in the beginning but hopefully we will attract sponsors this new theme.

QUESTION 9: Needs of environmental assistance from the IOF

IOF member federation	Scientific information on orienteering's impact on nature and the environment	Assistance in the land use or other environmental issues	Environmental guidelines for the IOF events	International Environmental Charter for orienteering
Singapore	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Russia	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Netherlands	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Switzerland			<input checked="" type="checkbox"/>	
Denmark	<input checked="" type="checkbox"/>			
Canada	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Austria	<input checked="" type="checkbox"/>			
Australia	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Belgium	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Hungary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sweden	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Italy	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
Brazil	<input checked="" type="checkbox"/>			
Belarus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Great Britain	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Czech Republic	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	

IOF member federation	Scientific information on orienteering's impact on nature and the environment	Assistance in the land use or other environmental issues	Environmental guidelines for the IOF events	International Environmental Charter for orienteering
Japan			■	■
Latvia			■	
Chinese Taipei	■		■	
Estonia	■		■	
Turkey	■	■	■	■
Portugal	■		■	■
Croatia	■		■	
Bulgaria			■	■
Spain	■	■	■	■
Israel	■			
Finland	■			
Norway				

Question 9. Needs for environmental assistance from the IOF (comments)

Netherlands	Written scientific papers on impact would be helpful.
Canada	Encourage sharing of information from other Federations would be helpful.

Australia	In general, the orienteering environment in Australia is different to most other orienteering environments. Also, the number of competitors in most Australian orienteering events is lower than in most of the events that have been subject to environmental studies in Europe. Scientific studies are of interest, but need to be interpreted in relation to local Australian environment and the relative scale of events in Australia compared with those in Europe. It is useful having environmental guidelines for IOF events and an International Environmental Charter for orienteering, if only to demonstrate that environmental concern in relation to orienteering is much more widespread than just in Australia.
Belgium	New scientific research needed (also applicable for Western-Europe and also for smaller organizations which are the majority of the activities, 100-500 participants). We struggle mainly with a perception issue. Facts needed to convince stakeholders that we are a low impact sport. To my opinion in discussions with environmental authorities we should also point to the fact that we don't need permanent infrastructure and as a consequence land that is permanently lost for nature (ex. Sport stadiums with parking lots, access roads, energy consumption for heating of this infrastructure etc.)
Brazil	As we do not have any kind of scientific information regarding orienteering's impact on nature, we believe it could help us in improving our event organization and also to have a better appeal with sponsor using this information.
Estonia	Guidelines would be helpful, because it would emphasize the importance of the topic and give a clear signal to the organisers and runners (as the topic is still quite new in Estonia)

Question 10.1. How does the access to land for orienteering within your country look like in the next 5 years?

Singapore	Will be more complicated, but not significantly
Russia	Will be more complicated, but not significantly
Netherlands	Will be more complicated
Switzerland	Will be more complicated, but not significantly
Denmark	Will be more complicated
Canada	Will be more complicated
Austria	Will be more complicated, but not significantly

Orienteering and the Environment

Australia	Will be more complicated, but not significantly
Belgium	Will be more complicated
Hungary	Will be more complicated, but not significantly
Sweden	Will be more complicated, but not significantly
Italy	Will remain the same
Brazil	Will remain the same
Belarus	Will be more complicated, but not significantly
Great Britain	Will be more complicated
Czech Republic	Will be more complicated
Japan	Will remain the same
Latvia	Will be more complicated
Chinese Taipei	Will remain the same
Estonia	Will be more complicated, but not significantly
Turkey	Will be more complicated
Portugal	Will be more complicated
Croatia	Will remain the same
Bulgaria	Will be more complicated, but not significantly
Spain	Will be more complicated
Israel	Will be more complicated
Finland	Will be more complicated, but not significantly

Norway	Will be more complicated, but not significantly
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Question 10.2. How does the access to land for orienteering within your country look like in the next 5 years? Comments (trends, problems, planned activities)

Netherlands	Every year we lose about 10% of our terrains due to enhanced nature conservation regulations. On average 2 planned events every year (from about 25) are cancelled on short notice because permission from the authorities was not granted at the last instance, where previously access was allowed.
Denmark	It will be much more difficult to get access to 15 new National Parks placed on public forests areas
Canada	Variable issues across the country. There is growing resistance from environmental authorities in allowing any off-trail use of protected natural areas.
Austria	Landowners fear more and more that they could be held liable for damage or accidents
Australia	Land access in Australia will remain complicated as landowners are risk focused and often reluctant to give permission. These factors have gradually increased over the years, but might be offset by increased exposure of children and their parents (future and current land managers) to orienteering and by improved risk management and communication by Orienteering Australia, State Associations and clubs. We also lose access to good orienteering terrain because of population growth and large private farms being split into smaller blocks of land.
Belgium	Legislation becomes more and more restrictive and as a small federation, it's difficult to have influence on this process. Environmentalists infiltrate environmental authorities, and this makes it harder to get access. Some of them are however willing but have a different view on the actual impact of the sport on the environment. To get access depends often on the personal view of the stakeholder and has often nothing to do with the actual nature value of the land. Pressure from hunters, the construction of fences in the forest due to the swine fever is a problem in the southern part of the country
Hungary	Working with hunters and the conservation agency is very difficult, sometimes getting more complicated. I would also like to improve the relationship between sports and the authorities. I think this is very important so that we can organise a varied race season from year to year. We need to be much more respectful of their rules and pay more attention to environmental issues.
Sweden	There will be a new guide for arrangements in nature from the Swedish Environmental Protection Agency adopted in the beginning of 2022
Italy	The main effort will be in keeping an open and positive dialogue with other stakeholders. With mutual recognition, conflicts are usually avoided.

Orienteering and the Environment

Brazil	We do not see any changes recently. Landowners are very cooperative most of the time.
Czech Republic	More and more outdoor activities are planned and need to negotiate the access to the forest and the will from the owners is lower, they require more money and are more concerned about the use of their land.
Japan	So far, we managed to organise competitions peacefully. I do not think there will be remarkable change in five years, but permission would be more strict.
Estonia	The overall tendency seems to be that the as the pressure to cut forests is high, the usage of nature protected areas is growing both by orienteering and other outdoor sports and leisure activities. It may result in more strict regulations in the areas with high usage intensity.
Turkey	The awareness of Orienteering will increase. However, the issue of scarcity and accessibility of areas needs to be studied.
Portugal	In the near future it will be more difficult to have permission to organise orienteering events in protected areas.
Spain	There are increasing limitations on the use of already mapped areas. In addition, restrictions on the use of new areas are increasing.
Israel	Due to ever-growing population, open/natural land is under increasing pressure - more use by recreationists, and destruction by infrastructure construction.
Finland	Individual land owners own smaller and smaller portion of land and they are usually more and more living in cities. This will mean we have more difficulties (mainly time consuming) to get permissions to use forests for events.
Norway	Even more professional.

Question 11.1. What support do you need from the IOF Environment and Sustainability Commission?

Netherlands	It would be helpful if we have insight in how other European countries classify their nature areas and relate access to terrains based on the classifications.
Canada	Items / suggestions listed above, sharing of environmental impact studies would be helpful. An education strategy for parks, landowners etc.
Austria	Scientific studies, field reports, best practice examples.

Australia	Publishing scientific studies and Zoom workshops on how environmental issues are dealt with in other countries are helpful. It would be useful for the IOF to compile and periodically update a list of all of the worthwhile studies undertaken on the environmental impacts of orienteering, together with website links where these are available.
Belgium	Data, scientific research, guidelines for dealing with land access and environmental issues.
Hungary	I think it would be very cool for the IOF to issue a general regulation on environmental protection. Referring to this, it might be easier for us to introduce new rules in Hungary. For example, I would very much like to ban disposable plastic waste (PET bottle, plastic cup at the finish, plastic cutlery, etc.) from the competition, but I am afraid that many will not accept this and people will be angry. However, I think we need to take this, as a lot of this type of rubbish is being produced in tournaments lately and many race organisers don't even collect it selectively (which I would also make obligatory).
Sweden	an international campaign to reduce the transport emissions related to orienteering.
Italy	Simple guidelines of general applicability (rather than focused on specific countries or environments)
Belarus	Guidelines on various topics related to the environment
Great Britain	Current and relevant data of environmental impact of the sport would be very useful.
Czech Republic	Support the green image of orienteering (also on European level) and the fact, that orienteering teaches respect for nature.
Estonia	p. 9.1, 9.2
Turkey	Information that is easy to understand, simple and easy to access by the general public.
Portugal	More scientific evidence about the environmental impact of orienteering, namely research papers and other support material.
Spain	Conducting scientific studies on the environmental impact of orienteering in nature in Spain. If possible, in different areas. Manual of good environmental practices for the development of a sporting event in our sport. To learn about positive initiatives in favour of the environment that have been carried out in orienteering races in other countries.
Finland	Studies abroad would be good to know.
Norway	Since "The survey is aimed at establishing areas of priority for the Commission in the coming years in preparing guidelines for the environmentally friendly conduct of orienteering events", I would like to understand how the data collected from the previous similar questionnaire has been used.

Question 12.1. Any other comments

Netherlands	COVID had a big indirect impact. Because of seriously increased recreational use of terrains by the general public, conservation authorities have limited off-road access for everybody. Access for orienteering is then denied on the grounds that if the general public see people running off-road (with a license), others (without a license) will also not keep to the roads.
Canada	Canada as a vast country has a wide range of ecosystems and that each have their own challenges
Australia	Where problems arise with land managers in Australia, this is commonly either due to a lack of understanding of the nature of orienteering or to personal prejudice because orienteering (and some other nature-based sports) do not match their own values on how public land should be used in the interests of the community. In the first case, this can be addressed by working constructively with land managers, in seeking to establish mutually agreed management guidelines for each area that we use. I have also prepared a comprehensive document entitled 'Managing Orienteering Events: A Guide for Natural Resource Managers and Landowners'.
Hungary	Thank you very much for the questions, look forward to the results.
Belarus	Thanks to the IOF for paying due attention to the environment
Portugal	It is important to emphasize the sustainable and environmentally friendly nature of orienteering towards national and regional authorities.
Croatia	Croatia rarely hosts bigger Orienteering events that hosts hundreds, if not thousands of athletes. Our competitions are relatively small, so there's also a lesser environmental impact. While we do pay attention to important environmental concerns such as waste management, nature protection and disturbance of animals, many concerns, like energy consumption, in our country have an insignificant effect on the environment
Spain	The development of this area will be increasingly necessary in our sport.



INTERNATIONAL ORIENTEERING FEDERATION