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# World Ranking Scheme Rules for International Orienteering Federation (IOF) Events

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## About this document

This document brings together the rules and principles of the IOF World Ranking Scheme.

The document covers FootO, MTBO, SkiO and TrailO.

A point valid only for one or more disciplines is marked with the specific abbreviation(s) in the margin.

	<b>1.</b>	<b>Aim of the IOF World Ranking Scheme</b>
	1.1	To encourage Federations to promote and develop orienteering by staging high quality international events.
	1.2	To harmonise event quality in different Federations.
	1.3	To award rankings points which contribute to the World Ranking Lists.
	1.4	To provide a valid way of comparing competitors from very different nations on a common scale, taking into account the status of the event.
	1.5	To conform to contemporary practice in the world of elite sport by establishing World Ranking Lists for orienteering which are seen as fair and are accepted worldwide.
	1.6	To act as a motivation for athletes to compete at World Ranking Events in their own Federation and in other Federations.
	1.7	To provide a means of establishing qualification criteria and starting orders for major IOF events.
FootO	1.8	To develop a Federation League Table to be used (in particular) for determining national quotas for the World Cup.
	<b>2</b>	<b>General provisions</b>
FootO	2.1	There shall be separate World Ranking Lists for Sprint and for Middle/Long Distance.
MTBO SkiO TrailO	2.2	There shall be a single World Ranking List.
FootO MTBO SkiO	2.3	World Ranking points shall be weighted according to the level of the event; higher points shall be awarded to those who do well at the IOF's highest level events.
FootO MTBO SkiO	2.4	At each race, the point differences shall be linear with respect to time; each minute shall be worth the same number of points from the fastest time down to the slowest time.
FootO MTBO SkiO	2.5	Every participant in a World Ranking Event who has completed his/her course according to the rules for the event shall receive at least 10 World Ranking points.
FootO MTBO SkiO	2.6	The World Ranking points gained by the winner of a race shall be fixed for the final races at the IOF's highest level events and limited by upper and lower bounds for other races.

	<b>3.</b>	<b>IOF World Ranking Lists</b>
	3.1	The IOF World Ranking Lists are based on the results in the following events:
		<ul style="list-style-type: none"> <li>• IOF World Championships</li> </ul>
FootO MTBO SkiO		<ul style="list-style-type: none"> <li>• IOF World Cup</li> </ul>
FootO		<ul style="list-style-type: none"> <li>• Orienteering events in the World Games</li> </ul>
FootO MTBO SkiO		<ul style="list-style-type: none"> <li>• IOF Regional Championships, classes W21E and M21E</li> </ul>
TrailO		<ul style="list-style-type: none"> <li>• IOF Regional Championships</li> </ul>
FootO SkiO		<ul style="list-style-type: none"> <li>• Orienteering Championships of FISU (The International University Sports Federation) and CISM (The International Military Sports Council)</li> </ul>
FootO MTBO SkiO		<ul style="list-style-type: none"> <li>• IOF Junior World Championships (A-finals only)</li> </ul>
		<ul style="list-style-type: none"> <li>• IOF World Ranking Events (WRE), as nominated by member Federations according to criteria determined by the IOF and accepted by the IOF Council into the official IOF Calendar of Events.</li> </ul>
FootO MTBO SkiO	3.2	In each discipline there shall be separate lists for men and women.
	3.3	Each competitor who features in the World Ranking Lists has an IOF Ranking ID provided by the IOF. Only athletes from IOF member federations are eligible to have an IOF Ranking ID.
FootO MTBO SkiO	3.4	Where the M18E/W18E and/or M20E/W20E classes are competing on the same courses and under the same conditions as the M21E/W21E classes, competitors in those other classes shall be included in the World Ranking calculations. For these other classes to be eligible for World Ranking Points, the start list must be prepared for course as a whole, not separately for each class.
FootO	3.5	There are two separate World Ranking Lists, for Sprint-type events, known as the <i>Sprint Orienteering World Ranking List</i> , and for Middle/Long Distance-type events, known as the <i>Orienteering World Ranking List</i> .
MTBO	3.6	There is a single World Ranking list known as the <i>Mountain Bike Orienteering World Ranking List</i> .
SkiO	3.7	There is a single World Ranking list known as the <i>Ski Orienteering World Ranking List</i> .
TrailO	3.8	There is a single World Ranking list known as the <i>Trail Orienteering World Ranking List</i> .

	<b>4.</b>	<b>IOF World Ranking Events</b>
	4.1	IOF World Ranking Events (WRE) are international events which are nominated by member Federations according to criteria determined by the IOF and accepted by the IOF Council into the official IOF Calendar. They are organised under the authority of the IOF and the Federation of the organiser.
	4.2	There is no limit on the number of WREs that a Federation may nominate each year.
	<b>5.</b>	<b>IOF WRE Service Fee</b>
	5.1	An IOF service fee, as determined by the IOF Council, shall be paid for IOF World Ranking Events (WRE) (last dot point of 3.1 above).
	5.2	There is no WRE service fee for the higher level events listed in 3.1 whose results also count towards the World Ranking List.
	<b>6.</b>	<b>IOF WRE Application Criteria</b>
	6.1	For the higher level events listed under 3.1, WRE status is accorded without a separate application.
FootO	6.2	For IOF World Ranking Events (WRE) only, there is an application procedure for each calendar year of World Ranking Events. Applications from member Federations for events due to take place in January, February or March must reach the IOF at least six months prior to the event date. Applications from member Federations for events due to take place in other months (April – December) should reach the IOF no later than September 30th in the year prior to the event year and shall be approved or rejected by the IOF by November 30th the same year.
MTBO TrailO	6.3	For IOF World Ranking Events (WRE) only, there is an application procedure for each calendar year of World Ranking Events. Applications from member Federations should reach the IOF no later than September 30th in the year prior to the event year and shall be approved or rejected by the IOF by November 30th the same year.
SkiO	6.4	For IOF World Ranking Events (WRE) only, there is an application procedure for each season (1 November – 30 April) of World Ranking Events. Applications from member Federations should reach the IOF no later than September 30th prior to the season and shall be approved or rejected by the IOF by October 31st the same year.
	6.5	All WREs shall be open events (with no restriction on entry by nationality, age etc.) unless otherwise determined by the IOF.
FootO MTBO SkiO	6.6	WREs shall provide one men's race and one women's race; these are normally of Long, Middle or Sprint type, defined in accordance with the IOF Competition Rules.
FootO MTBO	6.7	WREs should not normally be mass start events nor should they have chasing starts; however, requests to select mass or chasing start events as WREs should be made to the IOF Office and, in some cases, may be considered favourably by the relevant Discipline Commission.

SkiO	6.8	Mass start or chasing start races with individual time-keeping are allowed to be WREs provided the course is forked. WREs normally consists of one race. Sometimes the competition can be made up of two races: a prologue followed by a chasing start. In that case it is the total time of the two races that counts for WRE points.
	6.9	Where a multi-race event is selected, one (or more) of the individual races shall be nominated as the WRE.
	6.10	Events listed in 3.1 shall have an IOF licensed Event Adviser to control the competition (does not apply to FISU and CISM events).
	<b>7.</b>	<b>IOF World Ranking Points Calculation</b>
FootO MTBO SkiO	7.1	<p>Definition</p> <ul style="list-style-type: none"> <li>A ranked athlete for a particular race is defined as an athlete who finishes within the winner's time plus 50% and who has scored World Ranking points in the 18 months before the event with an average points score greater than or equal to 600, disregarding zero scores.</li> </ul>
FootO MTBO SkiO	7.2	<p>Preliminary calculations</p> <ul style="list-style-type: none"> <li>Calculate the mean MP and the standard deviation SP of the average prior unweighted ranking points of all ranked athletes.</li> <li>Calculate the mean MT and the standard deviation ST of the race times RT of all ranked athletes.</li> <li>Determine the unweighted (IP = 1) calculated score for the winner using the appropriate formula given in 7.4 below.</li> </ul>
FootO MTBO SkiO	7.3	The maximum ranking points for a race and the weighting factor IP for the race are set as follows:
		<ul style="list-style-type: none"> <li>World Championships Finals ("A" Finals only): <ul style="list-style-type: none"> <li>Winner scores 1500</li> <li>IP = 1500/Winner's unweighted calculated score</li> </ul> </li> </ul>
FootO		<ul style="list-style-type: none"> <li>The World Games <ul style="list-style-type: none"> <li>Winner scores 1450</li> <li>IP = 1450/Winner's unweighted calculated score</li> </ul> </li> </ul>
		<ul style="list-style-type: none"> <li>World Cup Finals ("A" Finals only): <ul style="list-style-type: none"> <li>Winner scores 1450</li> <li>IP = 1450/Winner's unweighted calculated score</li> </ul> </li> </ul>
SkiO		<ul style="list-style-type: none"> <li>European Ski Orienteering Championships: <ul style="list-style-type: none"> <li>Winner scores 1450</li> <li>IP = 1450/Winner's unweighted calculated score</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>• Other official IOF Regional Championships (non-World Cup status): <ul style="list-style-type: none"> <li>○ Winner scores a minimum of 1100 and a maximum of 1400</li> <li>○ If the Winner's unweighted calculated score is between 1100 and 1400, <math>IP = 1</math></li> <li>○ If the Winner's unweighted calculated score is less than 1100, <math>IP = 1100/\text{Winner's unweighted calculated score}</math></li> <li>○ If the Winner's unweighted calculated score is greater than 1400, <math>IP = 1400/\text{Winner's unweighted calculated score}</math></li> </ul> </li> </ul>
		<ul style="list-style-type: none"> <li>• All other races: <ul style="list-style-type: none"> <li>○ Winner scores a minimum of 800 and a maximum of 1400</li> <li>○ If the Winner's unweighted calculated score is between 800 and 1400, <math>IP = 1</math></li> <li>○ If the Winner's unweighted calculated score is less than 800, <math>IP = 800/\text{Winner's unweighted calculated score}</math></li> <li>○ If the Winner's unweighted calculated score is greater than 1400, <math>IP = 1400/\text{Winner's unweighted calculated score}</math></li> </ul> </li> </ul>
FootO MTBO SkiO	7.4	<p>Finally, calculate the ranking points RP for each competitor at the event as follows:</p> <ul style="list-style-type: none"> <li>• The formula <math>RP = (MP + SP \times (MT - RT)/ST) \times IP</math> is used if there are 10 or more ranked athletes.</li> <li>• The formula <math>RP = (2600 - RT \times (2600 - MP) / MT) \times IP</math> is used if there is at least one but less than 10 ranked athletes.</li> <li>• If there are no ranked athletes then MT is set to the winner's time and the formula <math>RP = (2600 - RT \times 1800/MT) \times IP</math> is used.</li> <li>• Any competitor who successfully finishes a WR event according to the rules of the event, but for whom RP is less than 10 as calculated above, shall be given 10 ranking points.</li> </ul>
FootO MTBO SkiO	7.5	<p>At the end of each year, both groups of athletes with current ranking points (i.e. men and women separately) shall have the unweighted points of each athlete re-based so that their average points have an overall mean and standard deviation which are the same as the previous year. However, the previously published scores do not change.</p>
TrailO	7.6	<p>At least 6 athletes must participate for a class to be valid for WRE points.</p>
TrailO	7.7	<p>Preliminary calculations</p> <ul style="list-style-type: none"> <li>• Calculate M6R, the mean of the ranking points of the 6 best ranked competitors at the event. Athletes with no ranking are assigned a score of 15.</li> <li>• Calculate the mean of the 3 best scores <ul style="list-style-type: none"> <li>○ For PreO: M3P is the mean of the 3 best points scored</li> <li>○ For TempO: M3T is the mean of the 3 best times scored</li> </ul> </li> </ul>

TrailO	7.8	Finally, calculate the ranking points RP for each competitor at the event as follows where PBW=Places Behind Winner: <ul style="list-style-type: none"> <li>• For PreO: <math>RP = M3P - CP + M6R + PBW \times 0.05</math> where CP is each competitors scored points at the event</li> <li>• For TempO: <math>RP = 3 \times (CT - M3T) / M3T + M6R + PBW \times 0.05</math> where CT is each competitors scored time at the event</li> </ul>
TrailO	7.9	Any RP higher than 15 will count as 15.
TrailO	7.10	At the end of each year, each athlete with current ranking points shall have their points re-based so that the leader of the World Ranking List has the score of 0 and the highest score is 15. However, the previously published scores do not change.
	<b>8.</b>	<b>Calculation of World Ranking List Score</b>
FootO TrailO	8.1	For scores to count towards a person's total ranking score, they must normally have been earned within 18 calendar months of the calculation date.
FootO	8.2	An exception is that a score earned in a final race at the most recent Official IOF Regional Championships can be counted in the person's ranking score, even if the event was more than 18 months ago, provided that the person is a full passport-holding citizen of a country in that Region.
FootO	8.3	A maximum of two WOC final scores can be counted towards a person's individual ranking in a specific ranking list.
MTBO	8.4	For scores to count towards a person's total ranking score, they must have been earned within 12 calendar months of the calculation date.
SkiO	8.5	For scores to count towards a person's total ranking score, they must have been earned within 18 calendar months of the calculation date. However out of season, between 1 May and 31 October, the rankings are static and show the ranking scores as they will be on 1 November.
FootO MTBO	8.6	The four best scores subject to the above provisions are totalled to give a person's ranking list score.
SkiO	8.7	The five best scores subject to the above provisions are totalled to give a person's ranking list score.
TrailO	8.8	The six best scores subject to the above provisions are totalled to give a person's ranking list score. If fewer than 6 scores exist, a value of 15 will be added for each missing score.
	<b>9.</b>	<b>Publication of World Ranking Lists</b>
	9.1	Results shall be electronically submitted to the IOF on the day of the race, containing the required information and in the required format as determined by the IOF. The IOF Ranking IDs must be included. Any athletes who are not from an IOF member federation (and therefore cannot have an IOF Ranking ID) must be omitted from the electronic submission.
	9.2	The WRE organiser is responsible for providing WRE results to the IOF. If the IOF does not receive the WRE results on time and in the required format, the WRE status of the event may be cancelled.

	9.3	The IOF World Ranking Lists shall be updated as soon as practicable following each WRE and published on the IOF website.
FootO	9.4	During a WOC period the World Ranking List for Middle/Long Distance shall be updated after the first of these two races and published by the morning before the second race in order to determine the start order for that race.
SkiO	9.5	During a WSOC period the World Ranking List shall be updated after each race and published by the next morning so that the start order for subsequent races can be based on the updated World Ranking List.

## Latest changes

4 There are no limits on the number of World Ranking events that a Federation may organise each year.

7.5 Rebasings makes the overall mean and standard deviation the same as the previous year; not necessarily 1000 and 200.

Include the TrailO ranking scheme