

World Wide Fund for Nature, Finland  
Finnish Environmental Institute  
International Orienteering Federation

## World Orienteering Championships 2001 Tampere, Finland

# Environmental Audit Report

Environmental Audit Team  
January 2002

### **Summary**

Aware that the sport of Orienteering has good environmental credentials, the Organisers of the World Orienteering Championships 2001, held in Tampere, Finland, decided to set themselves the target of WOC 2001 being the most environmentally friendly major sports event of the year.

Environmental targets were set for all aspects of the event. In addition to those concerning environmental impact on the flora and fauna in the competition area, a number of targets were set for reduction of material and energy consumption, recycling waste, educating and influencing participants, goods suppliers and the public.

An environmental audit of performance to these targets found that most, including the critical target of minimal impact in the competition terrain, were met. The targets with respect to transportation were not met. Overall the audit concluded that the environmental programme had been a success and acts as a reference model for other similar large events. The audit considered that it was unlikely that any other mass participation sport using the natural environment could match the environmental performance of WOC 2001 and that it was reasonable to conclude that

“WOC 2001 was the most environmentally-friendly major sports event of the year”

## **Introduction**

Orienteering is an environmental sport. It is regarded so for two reasons. Firstly, it takes place in the natural environment, often over terrain of high landscape and conservation value. Clearly there can be concerns about the potential for environmental damage.

Secondly, the Sport has accumulated good environmental credentials. It sets itself strict environmental targets of good practice and sustainability, and places emphasis on environmental awareness and education.

Orienteering is a mass participation sport in which the larger events attract several thousand entrants. Although WOC 2001 had only a few hundred international runners, the associated public races in the same venues brought the total entry, for environmental accounting, up to some 3000.

It might be expected that such numbers would cause some environmental damage in the competition terrain but long experience and a number of scientific studies have shown that orienteering has little or negligible impact on the environment.<sup>i</sup>

The reason for this good result is that the Sport conducts itself in such a way so as to achieve such an outcome. There are three essential components to this:

- The identification, with the help of conservation agencies, of sensitive areas in the competition terrain and avoiding them by good course planning.
- The dispersal of the competitors in space and time. Events have many different courses to accommodate the different age classes, male and female. The courses are spread out across the area and are designed so that the total number of competitors passing through any particular point does not exceed a sensible limit. The competitors are also spread out in time, usually starting individually over the space of several hours. The net result of this dispersion in space and time is light and transient disturbance.
- Areas are used infrequently, typically at intervals of a year or more, and this allows for full recovery of any disturbed fauna and damaged flora.

The primary focus of environmental interest in a major orienteering event is on the protection of flora and fauna in the competition area. However, increasing attention is being given to other aspects of the event, such as the competition centre, the services and the transportation to and from the event, with a view to setting high environmental standards for all of these.

### **Environmental targets for WOC 2001**

The organisers of the World Championships (and the associated Tampere Games public races) decided to build upon the good environmental characteristics inherent in orienteering by aiming for the best environmental performance for all aspects of their event.

They set themselves a target of making WOC 2001, amongst mass participation sports using the natural environment, the world's most environmentally friendly sports event of 2001. To achieve this they developed a comprehensive environmental programme<sup>ii</sup>, which received the support of many organisations, including the World Wide Fund for Nature, Finland.

An environmental programme specified the following environmental goals:

1. Protection of the natural environment;
2. Reduction of material consumption and the amount of waste;
3. Sorting and recycling of waste;
4. Minimising energy consumption and emissions;
5. Influencing the goods suppliers;
6. Instruction and education of participants and public.

The success of the programme was assessed by environmental audit.

### **Audit panel**

Brian Parker GBR International Orienteering Federation (Chairman)  
Minna Kokkarinen FIN Finnish Environment Institute  
Karoliina Auvinen FIN World Wide Fund for Nature Finland

Assisted by WOC 2001 Environment Group members:  
Erkka Laininen FIN; Harri Kallio FIN

### **Audit procedures**

The panel undertook to conduct a searching audit of the Environmental Programme for WOC 2001 and to use its best professional judgement as to the success or otherwise of the Programme.

The environmental goals had not been prioritised. For audit purposes the relative importance of the goals had to be taken into account. The first goal of protection of the natural environment was considered to take precedence in the list. This goal was interpreted in this instance as referring directly to the local environment consisting of the competition terrain, the competition centre and vehicle parking areas nearby. Protection of the environment in a general sense was considered to be incorporated in the other goals, these being important but subsidiary to the main objective.

The first audit session concentrated its attention on the Pulesjärvi competition site. Spot checks at other race sites of Teisko and Kauppi did not show any significant variations from Pulesjärvi, although the site layouts were different.

The second audit session was held after the competition, when the leaders and main members of the competition organisation (Competition Director, Erkki Eskelinen; General Secretary, Tuomo Haanpää; Transport Co-ordinator, Esko Mälkönen; Marketing Director, Jyrki Liljeroos; and on behalf of Restaurant Services Co-ordinator, Marja Kuuteri-Kallio) were interviewed. The objective was to evaluate the planning and management procedures of the WOC 2001 Environmental Programme.<sup>iii</sup>

The audit was very detailed and could provide useful guidance to future organisers. The audit results are summarised for each goal and overall.

### ***Goal 1. Protection of the (local) natural environment***

In the competition area measures for the protection of flora and fauna were planned in co-operation with landowners, hunters, environmentalists and local authorities. Sensitive zones were identified from the environmental database held by Tampere City. As the

competition was in July, these were mostly vegetation zones. Some confidential sensitive zone information was noted by the course planner but not recorded on any maps, in order to preserve its confidentiality. All these zones were designated out of bounds and avoided by the courses. The planner stated that the orienteering quality of the courses had not been adversely affected by the out of bounds areas and he had found it easy to plan to the required high standard and avoid sensitive areas for control sites and route choice.

An independent biological survey<sup>iv</sup> of random spot checks on routes in the competition area showed no harm to any significant or valuable area. Some new minor trails in places were visible but these were expected to disappear within a year or so. Moss dislodged from rock would take longer to recover fully but the overall impact of the competition was considered to be minor.

In the competition centre (this being located in fields adjacent to the competition terrain and containing the finish and spectator areas) all the facilities were erected and removed without damage to the local environment. With one exception, there was no trace that a major sporting event had taken place, other than the flattened grass which recovered in weeks. The exception was that the access track to the competition centre had been strengthened to take heavier vehicle loading, an improvement of benefit to the farmer.

Local discharge of waste water, for example from the competitors' showers, was into gullies which did not connect to water channels.

In the parking areas the buses were held on roads or hardstanding. Cars and light vehicles were parked in fields. Cutting up of the fields and access tracks was absent or minimal and produced no environmental problems.

*The audit concluded that the planning and implementation of measures for environmental protection had been of a particularly high standard and this goal had been convincingly met.*

## **Goal 2. Reduction of material consumption and the amount of waste**

No permanent structures were built for the competition, all structures being made of durable, re-usable material. Barriers, often made of disposable tapes and timber, were mostly in the form of re-usable fencing panels.

The overall amount of paper used for results and press information was, as intended, less than is usual. This was made possible through the provision of a continually displaying electronic board on site for results and television pictures and internet services off site.

*The audit concluded this goal had been met.*

## **Goal 3. Sorting and recycling of waste**

The refuse collection was organised according to the Refuse Collection Plan<sup>v</sup> tailored to the competition areas.

Sorting into labelled bins was largely effective, with a high degree of compliance, helped by 'eco-squirrel' attendants, but markedly improved when actual samples were attached to the bins.

It had not been possible to provide permanent dishes in the restaurants and disposable plates were used. Biodegradable disposable items had been preferred, but were not fully available because of difficulties with the sponsor suppliers. The soup plates made of cardboard were surprisingly not recyclable, because of the food scraps on them. For these reasons the waste sorting for the restaurant clients got complicated, but the problems were avoided with the eco-squirrels' guidance.

Toilet waste was efficiently transported away as required<sup>vi</sup>. Composting disposal had been preferred but was not available.

*The audit concluded that this goal had been met.*

#### **Goal 4. Minimising energy consumption and emissions**

Electricity supplies were brought in by temporary line from the grid, thereby making intrusive local generators unnecessary. The contract arrangements for electricity were that wind power generation was deemed to be the source. Reduction of power consumption for water heating was achieved by sensible water temperatures and a delivery system at the showers which minimised waste.

Different options were considered for organising transportation of competitors and spectators to and from the event sites (up to 40km from Tampere City). It was necessary to consider the particular needs of the participants, therefore the client-friendly option was selected: the choice between private car and public bus transportation was optional. The price of the bus transportation was quite high in comparison to the cost of car parking, but couldn't have been made lower within the competition budget because the bus company wasn't offering sponsorship.

Over the several days of the championships a total of 500 trips were made by bus, a very low figure considering the overall spectator total was between 20 000 – 25 000. The total number of parked cars was about 8 500 over the whole competition period, about 1500 each day. The bus trip was free for the organisers, competitors, and reporters. Despite that incentive only 10 % of the organisers and very few of the reporters and VIP-guests used the buses. On the other hand, the competitors made good use of bus transportation. Negative feedback was received from the public because of the insufficient parking space and expensive parking tickets.<sup>vii</sup>

Targets for transport were not met by a significant margin due to the 'easy and fast private car favouring' attitudes of the public, there being an insufficient cost and convenience incentive to use buses instead of private cars.

*The audit concluded that this goal had not been met, due to the shortfall in bus transport usage because of the visitors car-concentrated behaviour, which was beyond the organisers' influence.*

#### **Goal 5. Influencing the goods suppliers**

The environmental programme was introduced to environmentalists, sponsors and other partners in Spring 2001. This made a very positive impact among interested parties and helped the competition organisation to achieve its objectives concerning contracts with sponsors, etc.

The instructions of the local health authorities<sup>viii</sup> and the person in charge of purchasing mainly defined how the restaurant services were organised.

Organic food was not provided because the sponsor didn't have it available. However the locally produced and domestic food was preferred where possible. The main problem was predicting the consumption of food, especially in the kitchen at the competition centre.

The audit found it difficult to assess whether suppliers of goods and services had modified their procedures specially to meet the environmental targets of WOC 2001 or whether they already operated to the required standard.

*The audit concluded that this goal had been met in part.*

### **Goal 6. Instruction and education of participants and public**

Pre-information and guidance during the competitions was good, with well produced eco-tip signs being particularly effective. Awareness levels were high. So were compliance levels with only 10% of environmental questionnaire respondents considering their own participation in the environmental plan being less than average or good.<sup>ix</sup>

*The audit considered this goal to have been exceeded.*

### **Managing and planning of the WOC 2001 Environmental Programme**

The managing and planning process of the environmental programme worked well overall. It supported specially well the overall organisation of the competition. Also the environmental programme functioned very well as a tool for management strategy. It brought better options to courses of action.

The competition organisation couldn't have succeeded with the environmental programme without the help and support of the consultant and environmental team, which made their participation in the whole managing process essential. Another prerequisite was the preliminary environmental work and programme made by the Finnish Orienteering Union<sup>x</sup>. The support of the WWF Finland was considered very important indeed, especially in communications.

A long period of planning was necessary; during two years participants were informed regularly about the environmental programme. This overcame any initial resistance and gave everybody enough time to become familiar with the ideas and details.

Education was very well planned and carried out. Everybody in the organising teams received some kind of education about the environmental programme. It committed the organisers to an environmental approach and related this in practical terms to specific tasks of the different team members.

Audit panel considered that the WOC 2001 Environmental Programme acts as a good model for other similar events.

### **Overall comments and conclusions**

The audit panel was particularly impressed by the well organised and clean nature of the competition centre and all its facilities.

All statutory regulations laid down by the City of Tampere for large scale events were met or exceeded.

The environmental programme for WOC 2001 was conceived and implemented to a very high standard and acts as a reference model for other orienteering events and other sports.

Some improvements are worth considering when implementing environmental programmes in the future. For example, to improve the commitment of the competition organisation to the environmental programme it is important that the organisation leads the whole process and consultants only support it. It is also important to have one named person responsible for the environmental issues in the organisation. Also documentation concerning all aspects of the competition may have significance for environmental programming and auditing. For example, statistics on the consumption of food can be useful information for planning events like this in the future.

Overall the environmental programme can be considered to have been successful, despite the shortfall with transport arrangements. Particularly impressive were the measures to protect the natural environment in the competition area.

However, even given that other similar sport events have not been environmentally audited, it is difficult to see what other mass participation sporting events using the natural environment could match the WOC 2001 environmental credentials. Therefore the audit panel considers that it is reasonable to conclude that:

“WOC 2001 was the most environmentally-friendly major sports event of the year”.

On behalf of the Audit Panel  
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<sup>ii</sup> Anon. (1999). WOC 2001 Environmental Programme.

<sup>iii</sup> Auvinen K., Kokkarinen M. (2002). Ympäristöohjelman suunnittelu ja johtaminen -haastatteluraportti.

<sup>iv</sup> Kosonen L. (4.9.2001). Tarkastuspöytäkirja. Tampereen kaupungin ympäristövalvonta.

<sup>v</sup> Anon. (2001). Suunnistuksen MM-kisat jätehuoltosuunnitelma.

<sup>vi</sup> Tampereen elinkeinokeskus (2000). Järjestä tapahtuma Tampereella! Järjestäjän opas. Tampereen kaupunki.

<sup>vii</sup> Auvinen K., Kokkarinen M. (2002). Ympäristöohjelman suunnittelu ja johtaminen -haastatteluraportti.

<sup>viii</sup> Juvenes - Ravintolat Oy (23.5.2001). Ilmoitus: elintarvikkeiden tilapäinen myynti ja tarjoilu. & Koski M., Kuuteri-Kallio M. (17.7.2001). Suunnistuksen MM-kilpailujen ravintolatoiminnan omavalvontasuunnitelma.

<sup>ix</sup> Auvinen K. (2001). Environmental audit questionnaire to audience and competitors of WOC 2001 Tampere - results and conclusions.

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