

Session 2 – Monday, 15 April, 11.00 – 12.30

Tokyo 2020 Olympic and Paralympic Games

Optimising horse and athlete performance in hot and humid conditions

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Setting the scene

With Olympic and Paralympic Games and other events being held in potentially hot and humid conditions, the FEI initiates and supports scientific study, analysis and contingency planning to protect the welfare of horses and athletes while at the same time providing every opportunity for optimising performance when competing in such conditions.

High temperatures, with or without high humidity, low wind and strong sun can lead to decreased capacity to exercise, reduced performance and an increased risk of heat-related illness and or injury, both for **horse and athlete**.

This thermal stress increases the harder and longer horses and athletes exercise and the more thermally challenging the environment. Horses can sometimes be at greater risk in training as opposed to when competing.

The effects of thermal stress is cumulative and may build up during the course of training, warm-up and competition over days and weeks.

Mitigation measures to counteract the challenging climatic conditions expected for Tokyo 2020 will be necessary to enable horses and athletes to perform to the best of their abilities and to minimise any risk of heat-related illness and or injury.

There are many ways in which teams and athletes can minimise the effects of thermal stress. These include acclimatisation, changes to management, changes in training and warm-up and the effective use of cooling. The FEI has already issued guidance on this to National Federations – click [here](#) to download document.

The Tokyo 2020 OC, in conjunction with the FEI, has already scheduled competitions to avoid the most thermally stressful times of the day and will be accommodating the horses in air-conditioned stables. In addition, there are plans in place to provide multiple cooling facilities around the venues including shade, misting fans, water and ice.

Previous Olympic Games have taken place in hot and humid climates. These include Atlanta 1996 and Beijing 2008. In both cases the weather during the Games turned out to be less challenging than predicted.

Even though climatic conditions in Tokyo have the potential to be challenging, a safe and fair Games in 2020 is possible, provided appropriate measures are taken by the teams, OC and FEI working together.

The FEI has analysed weather data for the past 10 years for the two equestrian sites (Bajikoen – Dressage, Jumping, Eventing Dressage/Jumping and Para Dressage) and Sea Forest (Eventing Cross Country)

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Weather stations have been recording data onsite at both locations for the past two years and will continue to do so during the 2019 Olympic Test Event in August.

Next steps

The FEI has brought together a number of experts to work with the FEI and OC (Tokyo 2020 Climate Mitigation Working Group) to plan appropriate counter measures and contingencies. The group met at the end of January to start developing this plan beyond the measures already taken and referred to above (early/late competition scheduling, cooling facilities etc.).

Through the relevant FEI Technical Committees, each discipline has now been asked to consider what additional measures could be taken in the event of more challenging conditions. Examples may include shortening courses, adjusting speeds/time allowed, permitting changes in the dress code, reducing time between athletes in order to complete competition earlier in the day/start later in the evening, additional veterinary monitoring etc.

Planning and management of the Games will involve the use of the WBGT (Wet Bulb Globe Temperature) Index which has been validated for equestrian sport and was successfully used in the management of Atlanta 1996 and Beijing 2008.

A set of countermeasures and related WBGT trigger points was originally developed for Atlanta 1996 and subsequently updated for Beijing 2008 and remains in place for management of Eventing competitions. As part of the planning for Tokyo 2020 it is intended to update and extend the reach of this tool to cover all Olympic and Paralympic disciplines.

In parallel with the development of these contingency plans, a communications plan is being drawn up and will be implemented to inform and educate National Federations, Athletes, Grooms, Vets etc to give them every chance to prepare in advance of the Olympic and Paralympic Games and to be ready to perform to their best in Tokyo in 2020.