



IF Sustainability Case Study
**WORLD ARCHERY
EXCELLENCE CENTRE**



IF SUSTAINABILITY CASE STUDIES

The world faces significant challenges across a wide spectrum of economic, social and environmental matters. The Olympic Movement has both an opportunity and a duty to actively contribute to the global sustainability debate in line with its vision of “Building a better world through sport”.

With this in mind, and in response to recommendation 5 of Olympic Agenda 2020 (“Include sustainability within the Olympic Movement’s daily operations”), the IOC

conducted the International Federations (IF) Sustainability Project in 2016. This allowed the IOC to obtain an overview of IFs’ sustainability initiatives; identify

common topics, good practices and mutual challenges; and share information. One of the Project’s outcomes was a series of case studies, illustrating how IFs are actively contributing towards a more sustainable world.

As part of the IOC’s objective to profile the role of the Olympic Movement in sustainability through the aggregation of information and collective reporting, it was agreed that the identification and

sharing of IF sustainability case studies should be continued. These case studies form part of the enhanced support system provided to the Olympic Movement through the [IOC Sustainability Strategy](#).

Each case study is aligned with one or more of the IOC’s five sustainability focus areas: infrastructure & natural sites; sourcing & resource management; mobility; workforce; and climate. The studies are also aligned with one or more of the United Nations’

(UN) framework of 17 Sustainable Development Goals (SDGs).

This framework is pivotal for the Olympic Movement since in September 2015, the UN General Assembly confirmed the important role that

sport can play in supporting the UN’s 2030 Agenda for Sustainable Development and its SDGs.

The UN’s 17 SDGs provide a common framework for organisations to explain how they plan to contribute to sustainable development and tackle the key global sustainability challenges. The IF case studies attest to the fact that the Olympic Movement contributes to the achievement of many of these.



“Sport is also an important enabler of sustainable development. We recognise the growing contribution of sport to the realisation of development and peace in its promotion of tolerance and respect and the contributions it makes to the empowerment of women and of young people, individuals and communities as well as to health, education and social inclusion objectives.”

Paragraph 37, UN 2030 Agenda for Sustainable Development

Each IF sustainability project contributes to one or more of the IOC's sustainability focus areas and one or more of the UN's Sustainable Development Goals (SDGs)

IOC FOCUS AREAS



UN SDGs



A SUSTAINABLE BUILDING FOR THE SPORT OF ARCHERY

When planning its new World Archery Excellence Centre in Lausanne, Switzerland, World Archery resolved to create a building that was sustainable and had positive impacts on both the sport of archery and the local community. Through an agreement with the city of Lausanne, World Archery received the land in exchange for providing electricity to the city through its solar panels. The Centre opened in autumn 2016 and includes the following sustainability features:

- The roof is covered with 569 photovoltaic solar panels. The panels produce 155,000 kilowatt hours (kWh) of electricity per year, contributing to the production of local renewable energy. The use of solar panels

has also resulted in a reduction of 46 tonnes in potential CO₂ emissions during the first year of operations.

- The centre is heated and cooled by 19 geothermal wells. During the cold months, the wells pump heat from the ground into the facility, while in the summer the ground temperature regulates the ventilation. Throughout the year, the wells maintain the shooting halls at a constant temperature of 18 degrees, contributing to a reduction in heating and cooling costs.
- The external façade is made of wood lamellas, designed to resemble the patterns made by the trees in the forest that surrounds the building.
- World Archery used recycled concrete

“INCORPORATING SUSTAINABILITY INTO THE WORLD ARCHERY EXCELLENCE CENTRE FACILITATED OUR NEGOTIATIONS WITH THE LAND OWNERS, AND WILL SIGNIFICANTLY REDUCE BOTH OPERATING COSTS AND OUR ECOLOGICAL AND CARBON FOOTPRINT.”

JUAN-CARLOS HOLGADO, WORLD ARCHERY EXCELLENCE CENTRE DIRECTOR



OBJECTIVES

World Archery designed its new World Archery Excellence Centre to be an eco-friendly and sustainable building. Its main objectives were to:

- Promote the sport of archery in a sustainable manner through an exemplary sports facility.
- Minimise disruption to the building's surrounding environment.
- Reduce World Archery's carbon and ecological footprint.
- Achieve long-term financial benefits.



POWERED BY THE SUN



569
solar panels



260 watts
per panel



1,100m²
total surface area of
the panels



155,000kWh
total energy
produced per year

for approximately half of the main ground slab of the building.

- The building has a “green roof” surrounding the solar panels, which not only provides habitat for wildlife but also helps the building merge further into its surroundings, improves storm water management, conserves energy and reduces noise.
- To mitigate potential impacts on the local biodiversity, the building was moved five metres from its original planned location so as not to disturb an existing ecological corridor – an area used as a route by local wildlife.
- The two trees that were removed to make way for the construction have been replaced with 21 new trees.

EVALUATION

Since the Centre has only been operating for a year, it is too early to have clear figures on the cost and energy savings, however the Centre’s sustainability elements are already sending out a strong message regarding the benefits of sustainable construction.



LESSONS LEARNED

- Working with architects and construction companies experienced in designing and operating in a sustainable manner will benefit the project.
- It is worth consulting with local nature organisations, who are familiar with the surrounding environment and any legal requirements specific to your country.
- Conducting a life-cycle assessment of products can help to identify potential cost savings.
- Consider installing solar panels to bring both cost savings and, potentially, additional revenue.