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# Effect of the COVID-19 pandemic on the sports industry

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## 1. Introduction

The COVID-19 crisis made all convinced of the interdependence of different elements of sustainability—ranging from ecosystem integrity to health, well-being, and subsequent socioeconomic prosperity. The response to the crises needs to be equally all-inclusive, with Sustainable Development Goals (SDGs) providing a suitable framework.<sup>1</sup>

The 2030 Agenda for Sustainable Development is a collection of 17 inter-linked global goals prepared to be a blueprint for guaranteeing a more peaceful and sustainable future for the world's people. These goals show the roadmap and actions to be taken by all countries to provide a better world for their people.

Many organizations around the world have joined the United Nations Sustainable Development Program and have taken various steps toward fulfillment of the SDGs. Meanwhile, sports organizations have also joined the movement, while benefitting from the unique feature of sports as a valuable asset endeared by various social strata around the globe. The purpose of this chapter is to explain the role of sports in fulfillment of the goals of sustainable development and the actions that sports organizations can take to meet each of the 17 goals of sustainable development. Accordingly, the rest of this chapter deals with the importance of sport in the SDGs, as well as the various programs that sports organizations can implement to fulfill any of the SDGs in the world.



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## 2. Sports and sustainable development

Sports play an important role in sustainable development. Since sports are very popular among the people of the world, it can play an effective role in meeting the global goals of sustainable development. This is a fact that the United Nations has acknowledged to from a long time ago. Therefore the

unique potential of sports and its important role in sustainable development are mentioned in the related documents, reports, and guidelines of the United Nations. The Sport for Development and Peace is one of the most important programs of the United Nations following the 2030 Agenda for the SDGs, in which sports are considered an important and effective tool for fulfillment of the goals of sustainable development. The Sport for Development and Peace programs respect and consider the rights of all people to participate in sports and leisure activities. These programs use sports, organized play, and any other physical activity to allow people to participate in sports and physical activity, thus strengthening social ties and cooperation among those groups involved in sports to achieve Sustainable Development Goals.<sup>2</sup>

The role of sports in improving people's lives is so important that the United Nations signed a contract with organizers of the Tokyo 2020 Olympics to send its global message of sustainable development through sports and athletes at the Olympics.<sup>3</sup> The Tokyo 2020 Olympics has been the greenest Olympics in world's sports history. Though the advent of the Corona pandemic has thwarted all the plans and efforts of the Olympic organizers, their programs have not lost their importance. The Tokyo 2020 Olympics was planned as a platform wherein the United Nations and other organizations, active in the field of health and well-being, can convey their messages to the international community. Dr. Tedros Adhanom Ghebreyesus, the director-general of the World Health Organization (WHO), participated in a news conference in Tokyo. During his speech to the International Olympic Committee (IOC) members, he emphasized the role of the Olympic Games in uniting the world and igniting the solidarity and determination necessary for ending the pandemic together. He said the world needed the Olympics amid the pandemic "as a celebration of hope."<sup>4</sup>

So, sports are the powerful driving force of the SDGs. Its contribution shows how different organizations, responsible for sustainable development, can get united, work with each other, and use sports for development and peace throughout the world. Sports and development experts believe that sports can best be used to contribute to the SDGs. Sports contributions to some sustainable development goals have had significant effects, while for others the sports have had weaker effect.<sup>2</sup> Table 1 presents the actions that sports can take about each of the sustainable development goals.



### **3. Effects of COVID-19 in the sports industry**

The sudden emergence of the COVID-19 virus and its global outbreak inflicted great financial losses to the sports industry. Clubs were closed,

**Table 1** SDGs and contribution of sports.

<b>Goals No.</b>	<b>Goals</b>	<b>Contribution of sports</b>
1	End poverty	<ul style="list-style-type: none"> <li>• Employment productivity</li> <li>• Social security and the equal rights</li> </ul>
2	Zero Hunger	<ul style="list-style-type: none"> <li>• Funds for poverty programs</li> <li>• Mobilize resources for ending hunger</li> </ul>
3	Healthy lives and well-being	<ul style="list-style-type: none"> <li>• Healthy diets and nutrition</li> <li>• Raise awareness on food waste</li> <li>• Healthy lives through sports</li> <li>• Active and sustainable lifestyles</li> </ul>
4	Quality education	<ul style="list-style-type: none"> <li>• Health education</li> <li>• The equal right to education</li> <li>• Improvement of learning outcomes</li> <li>• Raising awareness about sustainability</li> </ul>
5	Gender equality	<ul style="list-style-type: none"> <li>• Advocacy and awareness-raising for gender equality</li> <li>• Equal participation of girls and women in sports</li> <li>• Empowerment and self-esteem increase of women and girls</li> </ul>
6	Availability of clean water and sanitation	<ul style="list-style-type: none"> <li>• Education for water management</li> </ul>
7	Affordable and sustainable energy	<ul style="list-style-type: none"> <li>• Standards for water sanitation</li> <li>• Energy provision systems</li> <li>• Renewable energy</li> <li>• Energy efficiency</li> </ul>
8	Economic growth and decent work for all	<ul style="list-style-type: none"> <li>• Economic growth and decent employment</li> <li>• Sport-based educational programs</li> <li>• Entrepreneurship</li> </ul>
9	Resilient, sustainable industrialization, infrastructure and innovation	<ul style="list-style-type: none"> <li>• Positively impact local and regional business</li> <li>• The labor market for youth</li> <li>• Capacity building, creating jobs</li> <li>• Responsible management of volunteers</li> </ul>
10	Reduce inequality within and among countries	<ul style="list-style-type: none"> <li>• Equality and respect for diversity</li> <li>• Platforms for human rights</li> <li>• Empowerment of people with disabilities</li> </ul>

*Continued*

**Table 1** SDGs and contribution of sports—cont'd

<b>Goals No.</b>	<b>Goals</b>	<b>Contribution of sports</b>
11	Sustainable cities and safe, resilient	<ul style="list-style-type: none"> <li>• Green spaces</li> <li>• Athletic facilities</li> <li>• Fair and equal societies</li> </ul>
12	Sustainable consumption and production patterns	<ul style="list-style-type: none"> <li>• Provision of facilities in areas affected by poverty</li> <li>• Building green facilities</li> <li>• Green production</li> </ul>
13	Climate action	<ul style="list-style-type: none"> <li>• Nature-friendly lifestyles</li> <li>• The responsible use of natural resources</li> <li>• Climate change and protection education</li> </ul>
14	Conserve and sustainably use the marine resources	<ul style="list-style-type: none"> <li>• Innovative solutions to preserve the ecosystem</li> <li>• Protect the environment</li> </ul>
15	Sustainable use of land	<ul style="list-style-type: none"> <li>• The preservation of terrestrial ecosystems</li> <li>• Campaigns on biodiversity</li> <li>• The construction of green sports facilities and infrastructure</li> </ul>
16	Peace, justice, and inclusive institutions	<ul style="list-style-type: none"> <li>• Implementation of human rights and solidarity</li> <li>• Promote a culture of peace</li> <li>• National unity</li> </ul>
17	Global partnership	<ul style="list-style-type: none"> <li>• Build and strengthen multi-stakeholder networks and partnerships</li> <li>• Create synergies</li> </ul>

competitions were not held, and sales of clothing and sports equipment decreased significantly. It was a great shock for the sports industry. Every element of sports has been affected, from athletes and clubs, sponsorships to the media coverage. Gradually, with COVID-19 having spread across the globe, the 2020 Olympic and Paralympic Games in Tokyo were postponed to 2021.<sup>5</sup>

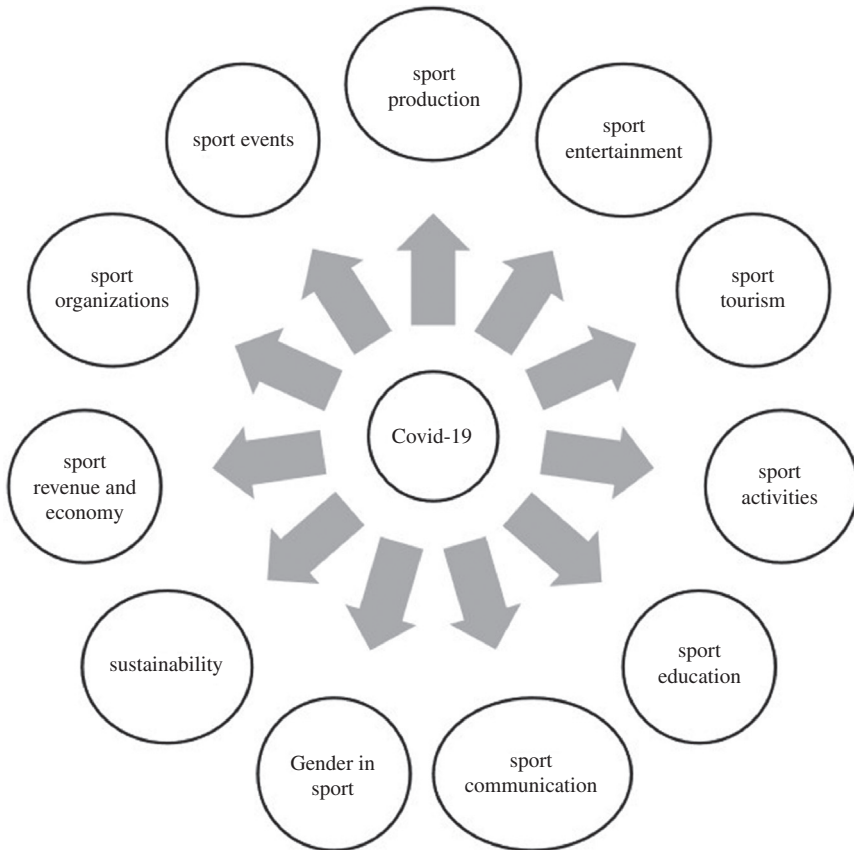
Shortly afterward, as scientists became more aware of how coronavirus behaved and controlled it, sports organizations resumed implementing their programs with certain restrictions. The COVID-19 pandemic brought about many changes in the sports industry. Sporting events were held without spectators, which was the case at all sporting events, large and small. The

Olympics were held for the first time without the presence of foreign spectators; meanwhile, the Japanese people, worried about the further spread of the disease in their country through the Olympics, marched in the streets and called on the authorities to stop the Olympics.<sup>6,7</sup> The organizers of the Olympics endured a lot of financial, human, and energy cost to host the Olympics, yet the 2020 Olympics were not economically viable for the Japanese.<sup>8</sup> The coronavirus changed the Olympic slogan for the first time. The original Olympic motto, "Faster, Higher, and Stronger" was changed to "Faster, Higher, and Stronger-Together" at the suggestion of the International Olympic Committee. The slogan emphasized the message of unity and solidarity to encourage participating athletes and the world's people to work together to defeat the coronavirus and make the world a better place to live.<sup>9</sup>

The pandemic also affected the production of sports products. Customers' tastes in buying sports equipment changed due to the conversion of club sports to sports at home. People became more inclined to use sports equipment at home. At this time, sports clubs were closed, and the purchase of club sports equipment was stopped. Pools were also closed, and people used home pools, and manufacturers of hydrotherapy equipment began to produce small-sized equipment for home use. In this way, the manufacturers of sports equipment, in order not to suffer bankruptcy, changed their products according to the pandemic conditions and the new needs of the people.<sup>10</sup> Most sports manufacturers and retailers also sold their products in online stores, changing sales management practices and customer relationships.<sup>11</sup>

Another sports industry sector affected by the global coronavirus outbreak was the sports media, which was confused in the first months of the pandemic due to the closure of all sporting events and did not know what to do in the absence of live sports programs. For this reason, the sports competitions of previous years were repeated on television. Also, reporters did not know what to report or what news to publish. Therefore the pages of newspapers and magazines were devoid of sports news, and most of them focused on information and knowledge about the importance of sports during the pandemic. As a result, sports breakdown left serious negative impact on the performance of sports media.<sup>12</sup>

The COVID-19 pandemic had so extensive negative impact on the sports industry that it is impossible to predict to what extent and for how long these effects will last. However, it can be said with certainty that exercise and sports during the coronavirus outbreak have played an important role in developing physical and mental health and maintaining vitality and individual spirit.<sup>13</sup>



**Fig. 1** Sections of sports industry affected by COVID-19.<sup>14</sup>

COVID-19 has affected various sectors of the sports industry, as shown in Fig. 1. Moreover, each section plays an important role in the development of the sports industry. The COVID-19 pandemic has affected the function of each of these sectors. In the rest of this chapter, the role of sports in contribution to the sustainable development goals and the effects of COVID-19 in the performance of sports organizations to address the 17 goals of sustainable development are discussed.



#### **4. Sport and the sustainable development goals in pandemic era**

As mentioned earlier, the sports industry can contribute to materialization of the SDGs. For this, it is necessary to discuss each sustainable development goal about how sports can be effective, especially in the pandemic

era, which affected all sectors of sports industries. In the following, the role of sports in achieving each of the sustainable development goals and the COVID-19 pandemic intervention on it are discussed.

#### **4.1 Goal 1: Sports can help end poverty**

Sports can have a positive impact on international development and combating poverty. Everyone has the right to participate in sports activities, regardless of any sociological characteristics or physical ability. Also, large international sporting events can reduce poverty because such events can be a boon for the area's commerce and lessening poverty.<sup>15</sup> So, sport is a productive industry<sup>16</sup> that can help people and their local economy improve through the employment of unemployed people.

For this, sports industries consider people of all races and gender to be able to have a better life with a suitable income. COVID-19 and its global outbreak had a serious impact on the social and employment's economic situation. In the pandemic era, organizations reacted differently to improve the situation. Many reduced salary of their staff. So, some of the staff preferred to continue working with less payment or temporarily leave the work. Other organizations forced their staff to leave or be redeployed to other departments.<sup>17</sup> So, the pandemic changed the role of sports in combatting poverty because this time, poverty was generated in sports and now it was time to make new decisions to tackle the new problem. To solve the employees' financial problems, organizations started to use financial support on part of government. Later, gradually, sports administrations decided to hold sports events without any spectators in the stadiums, but they could buy tickets to watch the games through internet media and this way financial problems of sports clubs and their staffs could be solved. Also, organizations and athletes began to help poor people by charity contributions such as food distribution, helping the disabled in quarantine, fund-raising, donations, accompanying people in problems, and providing spiritual assistance to the community through social networks. So, athletes and sports organizations helped people to have better control over their lives.<sup>3</sup>

#### **4.2 Goal 2: Role of sports in ending hunger**

Elimination of hunger and malnutrition and ensuring access to safe, nutritious, and sufficient food for all is essential. Enabling people to feed themselves properly gives them the means to be healthy and to prosper in society. This requires implementing sustainable goals and setting up resilient agricultural production systems that generate sufficient income to local people



while imparting basic nutritional knowledge. Nutrition plays a key role in sports performance and is an integral part of all sports training. Sports provides an ideal platform for raising public awareness, from an early age, of the link between health, nutrition, and sports, and the key principles of a healthy and balanced diet. Sports events also frequently spotlight local areas, producers, and products, thus offering many opportunities to promote local agricultural production.<sup>18</sup> During the pandemic, many people lost their job and had no income to manage their family economy. So, some sports clubs and some elite athletes started to feed the hungry or help poor people financially. Kevin, the love of the Cleveland Cavaliers, Giannis Antetokounmpo of the Milwaukee Bucks, and others donated a considerable amount of money for those who had suffered from the pandemic. Also, some athletes began feeding the hungry people. For example, Steph Curry and his wife Ayesha donated to the Alameda County Community Food Bank and Feeding America to help ensure kids will not have to worry about where their next meal will come from.<sup>19</sup> Alireza Khadem, the former Iranian wrestler, prepared lots of food packages and took them to the poor people who were not in a suitable situation.<sup>20</sup>

### 4.3 Goal 3: Healthy lives, well-being, and sports

Physical activity is one of the most important tools for a healthy life, while inactivity is one of the greatest risk factors for global mortality.<sup>21</sup> New data suggests that inactivity drives 1 in 14 deaths globally. In other words, evidence shows that inactivity drives up to 8% of noncommunicable diseases and mortality in the world.<sup>22</sup> Also, there is evidence that shows a significant relationship between physical inactivity-related mortality and countries' income. In other words, physical inactivity is responsible for a substantial economic burden. Accordingly, the global burden, associated with physical inactivity, is substantial. The relative burden is greatest in high-income countries; however, the greatest number of people (absolute burden), affected by physical inactivity, live in the middle-income countries given the size of their populations.<sup>23</sup> High-income countries bear a larger proportion of economic burden (80·8% of healthcare costs and 60·4% of indirect costs), whereas the low- and middle-income countries endure a larger proportion of the disease burden (75·0% of DALYs).<sup>24</sup>

Policies that can encourage growing participation in sports and active recreation can reduce physical inactivity, while contributing to prevention of diseases and supporting realization of the SDGs.<sup>25</sup> Results of wide-scale

research showed that sports for young people could lead to higher self-esteem, further empowering them to control stress, increased academic performance, and better family relationships.<sup>26</sup> These are protective factors or assets that can be potentially developed through sports and help prevent a range of problems. However, we should not forget that sports can itself lead to antisocial behaviors, including violence and hooliganism, drug abuse, cheating, and alcoholism.<sup>27</sup> Some athletes turn to drugs, including alcohol, to relieve stress and feel good.<sup>28</sup> Using drugs to improve performance in sports may lead to deprivation of an athlete from participation in a sport event. Drugs usage not only adversely affects health of the sportspeople but also harms reputation of the sports and sets a negative evidence to be considered by others. Sporting authorities have banned “performance-enhancing drugs” in sports. The World Anti-Doping Agency’s (WADA) “Prohibited List” and the authorities that are in charge of ensuring its observation aim to guarantee integrity of sports and ensure clean and fair competition.<sup>29</sup>

The COVID-19 outbreak reduced drug testing in sports. In March, both the UK Anti-doping (UKAD) and the United States Anti-Doping Agency (USADA) announced a reduction in their testing programs.<sup>30</sup> Creative thinking, such as in-home self-drug testing by the U.S. Anti-Doping Agency, was controversial.<sup>31</sup> Athletes were required to complete their normal whereabouts, while a doping control officer connected via videoconference during a prescribed period. So, athletes provided their urine and blood samples at home while the doping control officer watched them virtually. Athletes also were responsible for packaging and sending their samples to the antidoping laboratory.<sup>32</sup> This has led many athletes to protest the new method of doping testing and saying: The reduction of drug testing during the coronavirus pandemic was a “let-down,” “frustrating,” and “disheartening” job.<sup>30</sup>

#### **4.4 Goal 4: Quality education and sports**

Good quality education provides all learners with the capabilities to become economically productive, develop sustainable livelihoods, respect peaceful and democratic societies, and enhance individual well-being.<sup>33</sup> Access to inclusive and sustainable education enables people to escape poverty, deepens our knowledge of the world around us, and provides better opportunities for all, particularly girls. Quality education is a right for everyone in the world, and Goal 4 emphasizes it. Inclusive sports activities have long been used to promote education. Everyone, especially children, needs daily physical activity. They can reduce their anxiety and stress, improve their fitness and

self-confidence and self-esteem, and get a better lifestyle through using sports and physical activities. Also, sports can improve the quality of social communication. Thus sport is an important part of schools' curriculums. Results of various researches showed a linear relationship between physical activities and academic performance.<sup>34–36</sup> In other words, physical activities improve academic performance. It positively affects attention, concentration, and behaviors.<sup>37</sup> The COVID-19 pandemic forced an unprecedented global shutdown of schools for months. In many nations, schools were closed to students, and teachers directed educational activities remotely via digital devices or via the homeschooling resources. Also, the COVID-19 outbreak resulted in the cancelation of all organized after-school sporting activities.<sup>38</sup>

In the universities, COVID-19 had serious effects on all disciplines of sports education. Including sports coaching, class activities, students interaction with each other and also with their professors, sports and physical education activities, laboratory and clinical efforts. Despite the negative effects of a pandemic on sports education, some studies showed that most students had a good quality of life and high physical activity even with restricted education through online teaching and learning activities during the pandemic.<sup>39</sup> Even some were satisfied with the measures taken by the universities. However, some negative aspects were reported as lack of adequate infrastructure for some students, less effective teacher-student communication and interaction, the impossibility of performing practical applications, lack of socialization, lack of learning motivation, less objective examination, and the possibility of physical and mental health degradation.<sup>40</sup> Restricted education in the pandemic era created a “Knowledge gap” with the exchange of information between industry and education. The experts could not interact with students and discuss educational theories in practice, which could affect their future career.<sup>41</sup> Some experts believe that sports education in the postpandemic era will change, and it will most likely shift to more online education like every other academic discipline and using sports as an education tool will be an essential part of physical education. The sports industry will suffer, and this will result in a decreased demand for sports professionals. Those sports educators who are quick to adapt and have mastered the true online education are better positioned than their competitors.<sup>41,42</sup>

#### **4.5 Goal 5: Sport and gender equality**

In recent years, gender justice and women's empowerment in sports have received much attention. This is an interesting paradox because even though

many cases of gender inequality are observed in sports, sports play an important role in creating gender equality and women's empowerment. The value of using sports-based approaches to empower women and girls is an important focus across many Sport for Development and Peace (SDP) initiatives in the Commonwealth. As mentioned before, there is increasing recognition and important critique of existing inequality and gender-based discrimination in sports. Attention to this dichotomy will contribute to the Commonwealth's consultation process that highlighted the importance of intensifying efforts to advance gender equality and women's empowerment in all sporting contexts, including the SDP programs and projects. It was argued that it is not enough to consider isolated gender issues only to make these advances. Rather, stakeholders across sports and the SDP must take a mainstreaming approach and make gender equality inherent in all the policy-making and programming, while stepping up efforts to reduce gender-based discrimination.<sup>43</sup>

Undoubtedly, COVID-19 has had more negative effects on women's sports than men's.<sup>44,45</sup> The impacts of COVID-19 on girls and women in the sports field can be evidenced in different areas, such as leadership, gender-based violence, economic opportunities, participation, and representation in the media.<sup>44</sup>

During the pandemic era, women were less present in the decision-making position for sports, and therefore women were less used in sports leadership. Women lost their jobs in sports and faced wage cuts or reductions more than men, and as a result, the economic situation of women in sports worsened compared to men. Even when it was decided to hold sporting events again, the women's sporting events were absent in the sports arena, and as a result, the media coverage of women's sports during the pandemic was significantly lower than that of men, and this had adverse effects on women's sports revenue.<sup>46</sup>

Women athletes in Islamic countries were in a more difficult situation during the pandemic. Because of the religious restrictions, these athletes usually had little media coverage, and during the pandemic, their competitions were closed and removed from many media reports.<sup>47</sup>

In the postpandemic era, it seems that the sports events program will continue to be in favor of men's sports, and women's sports events will have a tiny share in the programs. This will also harm women's sports sponsorship, and because media coverage will focus more on men's sports events in the future, sponsors will not be inclined to support women's sports. For this reason, it is necessary to pay special attention to women's sports in planning in the postpandemic era.<sup>48,49</sup>

#### 4.6 Goal 6: Role of sports on availability of clean water and sanitation

Poor water supply is the reason for many people's death throughout the world. Therefore access to clean water is a vital need that the Goal 6 emphasizes. Access to clean water is such an important issue in sports that many sports celebrities promote it, and also it is a major challenge in the sports world, particularly for sports events organizers.<sup>50</sup> For instance, the Paris 2024 Olympic Games has joined the French Swimming Federation (FFN), the UNICEF, France, and thousands of people across the country to celebrate La Nuit de l'Eau (Night of Water), for improved access to swimming for all as a key legacy of its bid to host the 2024 Olympic and Paralympic Games. Le Nuit de l'Eau is an annual charity and sports event in France that, since 2008, has raised awareness on the importance of water as a vital resource and raised money to support the UNICEF's safe access to drinking water programs for children around the world.<sup>51</sup>

Sport can be an educational tool for managing water consumption considering the importance of using clean water. This important message can be conveyed to the community through sporting events, athletes, and various sports programs. For instance, the Football for Water, Sanitation and Hygiene (F4WASH) program in Kenya and Netherland<sup>52</sup> contributes to school children's improved access to water and sanitation. It thus provides a combination of hygiene education, safe water, and sanitation facilities, which give school children essential WASH services and an opportunity to nurture skills that they are likely to maintain as adults. They also use media in public education. In the Netherlands, water and sanitation facilities are installed at primary schools, and football coaches educate the children about using the facilities.<sup>52</sup>

Water use efficiency can be increased in sports facilities. In addition to the educational role of sports, as mentioned earlier, sports facilities can effectively manage water consumption and thus show the community that sports are not only a good educational tool for managing water resources and their proper use, but also being at the forefront of saving and managing water consumption.<sup>53</sup>

In some parts of the world, drought and water shortages are important issues of the future. For this reason, managing water consumption in sports venues, including the swimming pools, can be effective in preventing excessive consumption and optimal use of water. The results of Keshkar et al.<sup>54</sup> research showed that water pools in Tehran need to use water recycling systems, upgrade pool water technical systems, and provide general training on how to use water properly by users to manage water consumption better.<sup>54</sup> This example shows

that sports venues can play an important role in managing water consumption. In this regard, some experts believe that irrigation is not just a matter related to water use at stadiums. Other sections like sinks, toilets, urinals, and running water for purposes of cleaning and cooking should be considered as the areas in which officials can consider optimal water conservation and management. Water is one of the main exigencies of sports teams to operate. For instance, in hockey, you need about 12,500 gal of water to make the ice.<sup>55,56</sup> Therefore, to effectively manage water consumption in sports venues, officials need to identify all forms of water consumption.

It seems that the outbreak of COVID-19 and the closure of sports and clubs have had a positive effect on water consumption because the absence of fans and spectators in sports venues reduced the amount of water consumption (e.g., water used in toilets and restaurants, and for drinking, cleaning, and washing).<sup>53</sup>

#### **4.7 Goal 7: Ensure access to affordable, reliable, sustainable, and modern energy for all**

Access to energy for all is an essential element of sustainable development and constitutes one of the greatest challenges facing the world currently. The goal 7 highlights the need for universal access to clean and renewable energy to meet sustainable goals, guarantee inclusive communities, and combat climatic change.<sup>2</sup>

Sport and sports-based educational programs can support the initiatives that aim to ensure access to clean energy and promote energy efficiency. Sports facilities and events such as major international sports events can contribute to meeting the targets of generating renewable energy, ensuring energy efficiency, gaining access to the clean energy, and tackling climate change. Sustainable and inclusive sports infrastructure can promote organizational models that adopt clean and sustainable energy.<sup>37</sup>

The company Winwin Afrique has been tasked by the Côte d'Ivoire authorities to build a social and economic ecosystem through local sports centers. The aim is to encourage participation in sports and to use sports as a tool for development. The result is the AGORA program. The AGORA program, under which 91 complexes across Côte d'Ivoire are being built, is part of the country's 2016–2020 National Sports Policy, which aims to increase participation in sports in the country. The goals of this program include<sup>57</sup>:

- Promote participation in grassroots sports.
- Ensure that the population of Côte d'Ivoire lives within 3 km of a sports facility.

- Raise awareness among local people about the issues related to sustainable development (health, social innovation, and environmental protection).
- Stimulate the local economic fabric and create long-term local employment.
- Encourage the development of environmentally friendly facilities.<sup>57</sup>

Surprisingly, sports venues have been the pioneers in the promotion of sustainability. Many sports venues have jumped on the sustainability bandwagon to construct or renovate their structure in a race to minimize their carbon footprint, preserve their green legacy, and take the lead in innovation. The Amsterdam Arena is powered by more than 4200 solar panels and one wind turbine. The main building comprises an impressive energy-generating escalator. In November 2018, the Mercedes-Benz became the first professional sports stadium to receive a platinum Leadership in Energy & Environmental Design (LEED) certificate. Golden 1 Center, the home of the Sacramento Kings, was awarded the world's greenest and most technologically advanced sports and entertainment facility for 2017. Qatar's organizers for the 2022 football World Cup have pledged that all 12 venues will be zero-carbon emitting as an obligatory requirement from FIFA to deliver a zero-carbon tournament.<sup>58</sup> While many sports venues around the world are striving for sustainable development, some countries, including Iran, are not using renewable energy systems due to the economic hardships caused by global sanctions and some cultural and educational problems.<sup>59</sup>

Sport depends on the environment. This relationship is most obvious when the natural world is playing, and many of those sports see their playing conditions change. Winter sports need technology to recreate the playing surface, and indoor sports facilities require ventilation and lighting, which result in greenhouse gases. Therefore all sports activities have an impact on the environment. Before the COVID-19 pandemic, some sports organizations tried to meet the sustainable development goals in their initiatives. After COVID-19, the SDGs' values can be fully promoted in a healthier environment.<sup>60</sup>

Many researches showed that the COVID-19 pandemic caused a reduction of energy usage in sports venues. Chihib et al.<sup>61</sup> showed in their study on energy consumption in campus facilities that the situation of closing the campus facilities during the COVID-19 outbreak influenced the overall energy consumption of the campus. All facilities decreased their consumption value, and the majority of the facilities had a higher relative standard deviation in 2020 than in 2019. In their study, after analyzing the patterns

and conducting the inventory in the university facilities, energy-saving measures such as switching off water heating systems in sports facilities for the swimming pool and showers and unplugging all the computers and other unused appliances such as vending machines when the university locations are inoperative (confinement, summer break) could have an important impact on energy savings in the future.<sup>61</sup>

#### **4.8 Goal 8: Sport and economic growth**

Sustained and inclusive economic growth is a prerequisite for sustainable development, which can contribute to improvement of public livelihoods worldwide. Economic growth can lead to new and better employment opportunities and provide greater economic security for all. Moreover, rapid growth, especially among the least developed and other developing countries, can help them reduce the wage gap relative to developed countries, thereby diminishing glaring inequalities between the rich and the poor.<sup>62</sup>

Sport is a driving force for the economy. The global growth of the sports industry and its relationship with other organizations will create new jobs. Sports and sporting events are very popular among the people of the world, and for this reason, hosting sporting events activates many nonsports organizations at the national or global level. Hotels, travel agencies, water, land and air transportation, leisure and entertainment centers, health centers, and sports organizations are involved in hosting sporting events. Hosting international sports events such as the Olympics, FIFA World Cup, or the Super Bowl is the reason for significant economic development in countries. Hosting sports events could secure foreign capital inflows, generate employment, and make people want to spend money.<sup>63</sup> Hosting sports events promotes sports tourism, global media communication, national and global marketing, healthcare services which each, in turn, creates new jobs nationally and internationally. If these activities adopt sustainable and inclusive measures, they can contribute to economic, social, and environmental development.<sup>64</sup>

In 2019, 1.37 million people were engaged in the field of sports in the EU-27. Regarding gender balance, men (54%) outnumbered women, which aligned with the one observed in total employment. The share of young people aged 15–29 was 35%—twice the share observed in overall employment, while the 30–64 age group accounted for 63%. In the EU-27, the number of people in sports employment grew by almost 200,000 more compared to 2014, equivalent to an overall increase of 17%.<sup>65</sup>

COVID-19 pandemic harmed employment in the sports industry. European Observatoire of Sport and Employment (EOSE) analyzed the EU-28



sports employment data for the first two quarters of 2020. Across the first two quarters of 2020, total sports employment in the EU-28 fell by 3.3%. By the end of Q2 of 2020, there were 9.6% fewer females and 17% fewer young people<sup>15–24</sup> sports workers than at the end of 2019. The female and young sports workforce appears to have been much harder hit by COVID-19 in the first half of 2020.<sup>66</sup> During the pandemic, many sports organizations stopped hiring new staff. Others fired employees or hired them part-time or without pay, all of which harmed the employees' financial situation.<sup>16,67</sup>

COVID-19 has impacted the future of sports careers. So, some jobs will be accompanied by many changes. Hosting sports events will require compliance with health protocols, which will indicate a change in the status of jobs related to the events. Some jobs will be held using the internet and cyberspace, and some services will be restricted. In such a situation, sports organizations should be careful about employees' and athletes' health and economic status. Special insurances should be provided for them with proper support, and they should also pay attention to improving the economic situation of organizations. In the future, the SDGs' implementation and observation of international human rights standards should be part of building, planning, and running mega-sporting events.<sup>68</sup>

#### **4.9 Goal 9: The role of sports in achieving sustainable and resilient industrialization, infrastructure, and innovation**

Investment in sustainable and resilient industrialization, infrastructure, and innovation are essential to achieve the SDGs.<sup>69</sup> Sustainable industrialization refers to the transformation toward an industrialized economy that can help to create wealth, social development, and environmental sustainability.<sup>70</sup>

Infrastructure such as the supply of drinking water and electricity, the disposal and treatment of wastewater, the mobility of people and goods, and the provision of information and communication technologies<sup>71</sup> represents the backbone of our economies. It powers our machines, creates networks that connect people, helps to transport goods, and enables services such as trade, healthcare, and education. In short, infrastructure largely determines our livelihoods today and in the future; it is key for safeguarding our environment and represents the seams of our societal fabric. These are the reasons that infrastructure also lies at the core of achieving the UN's Sustainable Development Goals.<sup>72</sup>

Resilience, as another important concept in Goal 9, in broad terms, is defined as the capacity to recover quickly from difficulties. Building

resilience is crucial for organizations worldwide because they will always face challenges, big and small.<sup>73</sup>

The contribution of sport to the achievement of Goal 9 include: connecting with other sectors to grow the scale of the sports industry, organizing sports events regarding the local and regional business income, using labor standards for goods production, employing vulnerable groups, creating jobs and facilitating entrepreneurship, motivating community mobilization for economic growth, developing sports tourism, and encouraging volunteers.<sup>74</sup>

The COVID-19 pandemic had a significant impact on the sports' contribution to achieving Goal 9. Directions from public health organizations during the COVID-19 pandemic drastically altered the sports sector, prompting many sports decision-makers to reconsider what their organization does and how they do it. Although the full scope of the short- and long-term impacts is yet to be seen, some organizations have not survived. Others have used this period to adapt their operations, develop, and incorporate new ideas. To adapt themselves to crises, sports organizations need to undergo a dynamic process of learning, modification, and responsive decision-making to effectively respond to a changing and unpredictable environment.<sup>75</sup> At the beginning of the pandemic, sports organizations were forced to increase organizational resilience to prevent damage. They resisted pandemic threats by closing clubs and then hosting sporting events in a limited way. Sports organizations changed the process of providing sports services using digital media and in accordance with the environmental situation.<sup>76</sup>

Ghahfarokhi et al.<sup>77</sup> in their study on evaluating the challenges of sports businesses in the COVID-19 pandemic crisis, and introducing their resilience solutions, identified 11 challenges in two categories of "supply-side challenges" and "demand-side challenges." Also, 94 sports business resilience strategies for Corona and post-Corona eras were identified in four categories: "Marketing Mix Management," "Process Management," "Organizational Resource Management," and "Strategic Action Management." These operational strategies can save sports businesses from the risk of bankruptcy and exclusion from the sports ecosystem, while strengthening these firms to show growing resilience in the face of such crises in the future.<sup>77</sup>

#### **4.10 Goal 10: Sport and inequality elimination**

Many people face discrimination because of their gender, disability, or ethnicity. Sports can promote equality. Sport can also facilitate inclusion of persons with disabilities and vulnerable persons and the empowerment of women and girls.<sup>78</sup>

The pandemic negatively affected the lives of vulnerable groups, including children, the elderly, women, religious, ethnic and racial minorities, refugees and the homeless, the poor or the bankrupt, who suffered the greatest economic, social, and health damage during the pandemic era. Some damages include economic inequality, lack of equitable access to healthcare and sanitation services, and unequal access to safe working conditions and decent housing. In their research, Shur et al.<sup>79</sup> showed that COVID-19 affected older adults' health seriously. The elderly, those with chronic disease and lower socioeconomic groups, were disproportionately affected by restriction of movement, further widening the physical activity health inequality.<sup>79</sup> Also, COVID-19 restrictions have placed many different stresses and strains on the lives of people with disabilities. Social loneliness and social isolation had a significant impact on the health and well-being of every individual, especially for people with disabilities.<sup>80</sup>

Professional athletes and sports organizations can use their voices to raise awareness regarding the need to overcome the inequalities both demonstrated and exacerbated by COVID-19 and the types of measures that will need to be taken to do so.<sup>68</sup>

Sports in media can remove gender inequality by encouraging girls to participate in sports that boys traditionally play. Colombia instituted a quota rule that dictated that a certain number of football team members had to be girls, and the first goal had to be scored by a girl. This program educated girls on their capability and right to play any sports.<sup>14</sup>

#### **4.11 Goal 11: Sustainable cities and communities**

Every year, millions of people migrate to urban areas in search of a better life. By 2050 two-thirds of humanity—equal to 6.5 billion people—will be urban. According to evidence, more than 90% of all COVID-19 cases have occurred in cities, for example, highlighting some of the difficulties of living in densely populated areas.<sup>81</sup>

Sport offers multiple solutions, helping make cities and human settlements more equal, resilient, and sustainable. Besides health and physical activity, sports generate momentum for more green spaces, athletic facilities, jobs, and economic growth.<sup>82</sup>

COVID-19 highlighted the role of sports and exercise in promoting community health. More interestingly, during the pandemic and staying in quarantine, it became possible for everyone to exercise through virtual media, regardless of age or gender, at home. For example, sports trainers

made it possible for all family members to exercise using virtual sports classes. Also, sports equipment that could be used at home, such as dumbbells, stationary bikes, treadmills, and fitness equipment, were purchased for the family during the pandemic and could be used by all family members. So, participation in sports was provided equally to all family members. The pandemic caused people to take advantage of the antiinequality capacities of sports and use exercise for their health and family members.<sup>83,84</sup>

Sport has the potential to create public sports spaces in cities without discrimination. In public sports spaces in many cities worldwide, sports equipment and suitable space for the elderly, children, and the disabled and other social groups have been designed and built. This feature of sports helps to achieve the SDGs to create sustainable cities and communities.<sup>85</sup>

#### **4.12 Goal 12: Responsible production and consumption**

Sport can affect people's attitudes toward environmental protection and take the necessary measures to achieve the SDGs. Sports events are the best opportunity to show the importance of the environment and the use of green products, and the implementation of green management in front of the eyes of spectators who are either present at sports venues or watch it through the mass media.<sup>86</sup>

Sport can influence the behavior of people in society to achieve the goals of sustainable development. One of the most important problems in the world is the overuse of plastic. This substance is widely used in sports. Plastic is used in almost all sports equipment, from the floor of gyms to sports equipment and clothing, and finally containers and bottles of drinks and the cases of food for athletes. Usually, after sports events, venues are full of bottles or plastic bags. Therefore the sports itself pollute the environment with plastic. On the other hand, benefiting from green management, applying green products in sports venues, and recycling plastics that are used in stadiums will allow the sports to move toward meeting sustainable development goals.<sup>87</sup>

The Clean Seas Campaign, launched by the United Nations Environment Program in 2017, aims to engage governments, the general public, civil society, and the private sector in the fight against marine litter by addressing the root causes of the problem. The IOC is a member of Clean Seas alongside many sporting bodies and sponsors. [Table 2](#) presents some actions taken in connection with this project.<sup>88</sup>

According to the Tokyo 2020 Olympics organizers' announcement, enough plastic was collected to create recyclable podiums. It collected

**Table 2** The action of the clean sea campaign.

Process	Definition
Refuse	Stop using single-use plastic
Reduce	If plastic is necessary, find ways to use less
Reuse	Switch single-use items to reusable versions
Replace	Switch to plastic-free alternatives or select plastics that are recycled or easily recyclable
Recycle	Design your event to ensure that any plastic used gets recycled

*Source:* IOC & UN Plastic Game Plan for Sport 2020.

24.5 tons of used plastic and around 400,000 laundry detergent bottles for conducting the eco-friendly games. Major retailers and 113 schools from across Japan and Tokyo 2020 and Olympic Games sponsoring P&G Group helped the organizers make the initiative a success. The materials were collected over 9 months, and the campaign reached its goal in March 2020, the same month that the games were postponed to next year due to the COVID-19 pandemic.<sup>89</sup>

The outbreak of the COVID-19, resulting in the cessation of competitions or the restriction of spectators in stadiums, has reduced the consumption of plastic containers such as single-use water bottles in stadiums. However, on the other hand, the cessation of many trade relations between companies around the world has reduced the supply chain of raw materials for sports equipment that are made from recycled plastic materials.<sup>90</sup>

### 4.13 Goal 13: Sport and climate action

Climate change is one of the most important problems and the threat of the present century, which, if not addressed, will have adverse consequences for human life.<sup>91</sup>

COVID-19 and climate change both lead to global disruption that transcends borders and threatens the lives of millions of people and also are risk multipliers that exacerbate inequalities by disproportionately affecting the most vulnerable, each in its way. COVID-19 and climate change pose health threats of global magnitude.<sup>92</sup>

More than 50 million people were doubly hit in 2020 by climate-related disasters (floods, droughts, and storms) and by the COVID-19 pandemic. The COVID-19 and related quarantine worsened food insecurity and added another layer of risk to evacuation, recovery, and relief operations related to high-impact events. When disasters (storms, floods, and earthquakes)

happened in different parts of the world in 2020, response and recovery operations were hampered, leading to delays in providing equipment and assistance.<sup>93</sup>

Athletes and sports organizations have an important role to play in the general response to climate change and the damage it causes. For example, in 2009, the Athlete for Earth Campaign was launched by the Earth Day Network, which featured many well-known professional athletes and Olympians. The campaign aimed to build solidarity between the people, sports organizations, and the environmental movement to counter destructive acts against the environment and natural resources.<sup>94</sup>

Human emissions of carbon dioxide and other greenhouse gases are a primary driver of climate change and present one of the world's most pressing challenges. This link between global temperatures and greenhouse gas concentrations—especially CO<sub>2</sub>—has been true throughout the Earth's history.<sup>95</sup>

Based on a research conducted in 2020 on the greenhouse gas emissions, the global average temperatures have increased by more than 1°C since preindustrial times, and the concentration of CO<sub>2</sub> emissions has been reduced by almost 40%, compared to 2019.<sup>96</sup> However, during the pandemic, CO<sub>2</sub> emissions have declined by 25%, equal to 100 million tons of CO<sub>2</sub> emissions.<sup>97</sup>

Sports events constitute the ultimate product of the sports industry, and they are characterized by a large number of participants that attend or people who work for the event.<sup>98,99</sup> The massive production and overconsumption of sports products and services depend highly on thousands of sports events hosted annually across the world.<sup>100,101</sup> The main products of sports events include, but are not limited to, the merchandise of sporting goods and services, their delivery practices to facilitate sports consumption, and the implementation and practice of sports events.<sup>99</sup> Also, people who travel for sports events usually consume sporting goods and services in their daily lives. Consequently, these practices contribute to the vast majority of CO<sub>2</sub> emissions.

Moreover, the quantity of CO<sub>2</sub> emissions through sports production and consumption is associated with the type of sports events. For instance, the type of sports events that has the largest impact on the natural environment includes mega-scale sports events, such as the Olympics Games, the FIFA World Cup, the Super Bowl, and the collegiate football.<sup>99</sup> During such mega-scale sports events, spectators use different modes of transportation such as Single-Occupant Vehicles (SOV) and carpooling practices (e.g., traveling with family or friends).<sup>102</sup>

Given the outcome of COVID-19 restrictions toward the sports events, the limited transportation practices of sports teams and spectators, and the reduced functioning of sports facilities, it is vital to explore the CO<sub>2</sub> emissions that have been avoided during the COVID-19 crisis.<sup>103</sup>

Accordingly, in 2019, 278 million people attended sports events.<sup>104</sup> In 2020 the Statista forecast with the adjusted impact of COVID-19 predicted an average of 114 million people, which represents more than a 50% cut in attendance. Therefore, by calculating the annual impact of traveling behaviors in sports events, in 2019 spectators were responsible for 2.5 billion tons of CO<sub>2</sub> emissions, compared to the expected 912 million tons of CO<sub>2</sub> emissions in 2020. The statistics illustrate that more than 1.5 billion tons of CO<sub>2</sub> emissions will be avoided due to the controlled transportation variable.<sup>104</sup> Based on the most recent evidence, on average, industrial and human-induced practices emit 36 billion tons of CO<sub>2</sub> emissions in the atmosphere per year.<sup>95</sup> If we calculate that 2.5 billion tons of CO<sub>2</sub> are emitted by the spectators' transportation only during sports events, the sports industry might significantly impact the CO<sub>2</sub> emitted annually. Essentially, the sports industry, particularly the traveling behaviors of sports stakeholders, has a massive effect on the natural environment.<sup>103</sup>

#### **4.14 Goal 14: Sports role in conserve and sustainably use the marine resources**

Ocean acidification, illegal fishing and overfishing, and marine and water pollution are currently putting our marine and water ecosystems at risk.<sup>50</sup>

The role of sports to unite people in protecting our planet's biodiversity and in the fight against climate change could be a genuine game-changer. Why are sports beginning to adopt this cause as their own? It can be because of the natural fit between sports and the environment; Athletes needing clean air to train in, snow to ski on, reasonable temperature conditions to run or play in, and going forward. Commercial aspects of sports are likely to be more affected by stoppages in major tournaments because of adverse weather or unacceptable conditions.<sup>105</sup>

Numerous sports activities depend on the conservation of coastal, marine, and water-related ecosystems. The sports world is committed to addressing this challenge. Participation in sports, particularly water sports, enables us to learn about these ecosystems and the importance of conserving them. Furthermore, the sports industry, which involves athletes, event organizers, and companies, is developing innovative solutions to preserve the ecosystems.<sup>50</sup>

The COVID-19 crisis and its consequences on aquatic sports are considerable. The Swimming, Diving and Water Polo Federation of Iran president said: “The outbreak of COVID-19 has greatly damaged the country’s sports, especially water sports.” He declared that aquatic sports in Iran had suffered the most from the COVID-19.<sup>106</sup> The COVID-19 crisis and its consequences for the swimming community have created a myriad of challenges for swimmers worldwide, including maintaining their fitness level and preparing to return optimally and safely to pool training and competitions. Several significant decisions were made to postpone or cancel major swimming events by FINA (Fédération Internationale de Natation). Swimmers were no longer allowed to continue their usual training in swimming pools and were confined to their homes.<sup>107</sup> Wendtlandt et al.<sup>108</sup> in a study on the Effects of Sports Activities and Environmentally Sustainable Behaviors on Subjective Well-Being before and during COVID-19 showed that nature-based and nature-neutral sports activities were significantly decreased during the first COVID-19 lockdown, while environmentally sustainable behaviors were increased. The regression analyses revealed that nature-based and nature-neutral sports activities and ecological consumption significantly added to individuals’ subjective well-being in the pre- and during COVID-19 period. A decrease in nature-based and nature-neutral sports activities significantly predicted a decrease in individuals’ subjective well-being.<sup>108</sup>

Anyway, though water sports may encourage people to take care of the environment on the other side, some water sports, for instance, boating, can damage the water environment through noise pollution, the deposits left from boats, sediment disruption, erosion, and disturbance of fish habitats<sup>109,110</sup> during COVID-19. This is while stoppage of water sports competitions in the pandemic era may have decreased some of these unfavorable impacts.<sup>10</sup>

#### **4.15 Goal 15: Sport and sustainable use of land**

The SDG 15 has the principle of protecting, recovering, and promoting the sustainable use of terrestrial ecosystems, while managing forests in a sustainable way, combating desertification, stopping and reversing land degradation, and stopping biodiversity loss.

Quality sports practice has always required access to a healthy natural environment. With the rise in outdoor sports in nature, the conservation of terrestrial spaces and ecosystems has become a major challenge for the sports world. Based on the example of events, labeled as “sustainable” or “zero



waste” and initiatives combining sports and waste collection, the sports industry can be the source of innovative solutions for creating the eco-friendly practices. Sports events, and sports activities in general, provide a unique platform for raising public awareness since the early ages about the importance and the challenges of protecting forests and mountainous areas.<sup>69</sup>

Sport can play a very important role in the preservation and conservation of our land. In Tokyo 2020, activities to clean up forests and parks were so extensive to get prepared for the event.<sup>111</sup>

Compared to other SDG goals in sports, COVID-19 had the least pressure on the goal 15. However, the competitions in which people were invited to promote and preserve nature and ecosystems were stopped.<sup>112</sup>

#### **4.16 Goal 16: The role of sports in peace, justice, and strong institutions**

Remaining in quarantine and stopping the social and economic activities of the people during the pandemic increased the number of violent behaviors and human conflicts.<sup>113</sup>

Sport has always been used as the best solution to individual, national, or international conflicts. Sports diplomacy is a gateway for countries to confront their political problems through sports. This way, sport can help build bridges between communities in conflict.<sup>68</sup> The history of sports is full of examples in which sports and athletes have played an important role in solving the political problems of countries.<sup>114</sup>

Some of the most important examples of the role of sports in conflict resolution include ping-pong diplomacy, which was used to resolve the political dispute between the United States and the People’s Republic of China in the 1970s. Didier Drogba, the football legend, is another example of sports that had an important role in stopping a civil war in the Ivory Coast in the 2000s. As other examples of athletes playing important roles in confronting political discriminations, reference should be made to a group of brilliant names in sports history such as Tommie Smith and John Carlos. The latter athlete took black-gloved stance against racial inequality in the 1968 Summer Olympics. Members of the Zimbabwean cricket team wearing black armbands citing the “death of democracy in our beloved Zimbabwe” should also be mentioned. Alternatively, the “hands up, do not shoot” gestures, made by the St. Louis Rams in their 2014 NFL game against the Oakland Raiders, is another example. In each case, these evidences demonstrate the unique position that athletes reserve, especially considering the press coverage of major events.<sup>115</sup> Sometimes it is sports organizations that

play an effective role in solving the problems. For example, let's refer to the intervention of the World Football Federation to solve the problem of Iranian women attending football stadiums in 2019.<sup>116</sup>

In addition, sports culture has concepts and values such as self-sacrifice, chivalry, fair play, and teamwork, each of which can provide young people and adolescents with important learning for their social life.<sup>117</sup>

As mentioned, sport serves as a powerful means for bridging, bringing people together, and guaranteeing peace; it builds friendships and draws lines of respect across borders. Thomas Bach, the IOC president, declared: "The Olympic athletes show the whole world that it is possible to compete with each other while living peacefully together." Contributing to building a peaceful and better world through sports is a Fundamental Principle of the Olympic Charter, and it is why the IOC regularly joins the celebrations of the International Day of Peace, observed around the world on 21 September.<sup>118</sup>

The COVID-19 outbreak not only postponed the 2020 Olympics in Japan but also the competitions without spectators from different countries for a year, and this is the first time in the history of the Olympics that this important sporting event has been held without spectators from abroad. In fact, the peaceful and nondiscriminatory presence of the world's people on the Olympic scene has been stopped only because of the coronavirus pandemic.<sup>119,120</sup>

#### **4.17 Goal 17: Sport and global partnership**

Achieving sustainable development goals requires the cooperation and support of people, investors, organizations, and institutions. Sport can catalyze, build, and strengthen multistakeholder networks and partnerships for sustainable development and peace goals, involving and bringing together the public, governments, donors, NGOs, sports organizations, the private sector, academia, and the media. Sports can gather many supporters and create a network of sponsors who work to achieve sustainable development goals through the presence and support of sports.<sup>68</sup>

Global partnership in different parts of the sporting industry was affected by the COVID-19 outbreak. The World Federation of the Sporting Goods Industry (WFSGI) had challenging circumstances to work with their global communities, members, colleagues, partners, families, and friends whom the unprecedented spread of COVID-19 had impacted. About 30% of sporting goods-producing companies are looking to consolidate the supply base and keep only strategic partners. It means they have to decrease the number of

their products and reduce their demand by canceling orders and restrict their global trading.<sup>121</sup>

Nike collaborated with the World Federation of the Sporting Goods Industry (WFSGI) and other member companies to launch a physical activity guide to support the World Health Organization's (WHO) work to promote physical activity. 'WHO Is Healthy at Home' campaign encouraged people to stay active while being at home during the COVID-19 crisis, and the guide provided resources to help. In the guide, the president of Nike declared: "We used NIKE's scale and influence to raise the bar for sustainability. We launched our Supplier Climate Action Program to develop pathways for carbon reduction for our materials and finished goods manufacturers".<sup>122</sup>



## **5. Cons and pros of COVID-19 for the sports industry and sustainable development**

It could be argued that the global outbreak of COVID-19 was the most significant crisis of 2020 and 2021. This crisis in the sports industry is a turning point for the present and future of world sports. Although this crisis had unfortunate consequences for the people of the world, we should not forget that this crisis also led to good results, which are briefly discussed as follows. The crisis of COVID-19 taught us the following points:

- The world is truly a global village where good and bad events do not always remain within the confines of one country or region and can involve the whole world. So, think global and instead of improving the situation of a country, think about the welfare and health of the whole world. It reminds the great concept in Iranian poet, Saadi's famous poem: "Human beings are members of a whole, since in their creation they are of one essence, when the conditions of the time bring a member (limb) to pain, the other members (limbs) will suffer from discomfort."<sup>123</sup> So, if Olympic Games are stopped, it means sports in all the world are stopped, and it means that it is a common pain.
- To take potential risks seriously when planning for sports organizations to use Plan B when a crisis occurs and be able to manage the crisis. Lack of risk management programs in many sports organizations worldwide caused them serious economic, social, and organizational problems. This B plan can include organizational performance, production, human resource management, national and international communication, etc.
- To learn from each other in times of crisis and help each other keep world sports alive and active. When in a particular country, the sports

authorities decide a resistance program against pandemic to keep their sports alive, and they succeed, then other countries can follow suit and repeat their experience in their country.

- Human communication is essential for survival and sustainable development. During the pandemic era, social media was the best means of communication among people trapped in-home quarantine, and athletes around the world tried to use social media to help people maintain their physical and mental health through exercise. Many athletes became the social leaders of the people of the world and gave them morale and hope. It means that sports heroes belong to all the world.
- Education is a global requirement, and a pandemic with the help of digital media and platforms has helped professionals worldwide hold international webinars and global education through webinars and virtual conferences. Corona brought experts and scientists closer together and made scientific communication easier and wider in the world.
- Conservation of nature and the ecosystem is essential to guarantee better life for all the world people. Sports is always a good platform for guiding and teaching people to preserve nature. The pandemic has drawn the attention of sports organizations to sustainable development through sports more than before. Waste management in sports, use of natural energy and carbon dioxide, and prevention of environmental pollution, caused by holding sports competitions, need paying more attention in the postpandemic era to guarantee sustainable development and ecosystem preservation.
- Compared to other issues, central issues of sustainable development, i.e., social and economic justice, were affected the most in the pandemic era. Domestic violence against women, the economic losses of women's sports, discrimination against women, the poor economic situation of sports club staff, the bankruptcy of sports club owners, inadequate health insurance support, the disabled and the elderly sports, etc. are some of the most important harmful aspects of the pandemic. In the postcorona era, sports organizations need to pay more attention to them.
- Finally, although COVID-19 was a serious threat to all sports organizations and people around the world, organizations and intelligent people took advantage of the threat and, by carrying out social and economic activities tailored to the needs of today's society, became the leaders of organizational innovation in the sports world. Furthermore, the post-COVID-19 special sports products and activities that could engage individuals and organizations reaped unprecedented revenue for their producers and sponsors.

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