

Playing the long game

A framework for promoting physical activity through sports mega-events

Fiona Bull Paul Simpson Didi Thompson Abdulla Saeed Al-Mohannadi Ravinder Mamtani Javaid Sheikh Mohammed Bin Hamad Al-Thani Suggested reference for this report: Bull F, Simpson P, Thompson D, Al-Mohannadi A, Mamtani R, Sheikh J, Al-Thani M. Playing the long game: A framework for promoting physical activity through sports mega-events. Doha, Qatar: World Innovation Summit for Health, 2022

ISBN: 978-1-913991-29-6

Playing the long game A framework for promoting physical activity through sports mega-events

WISH 2022 Forum on Sports Mega-Events and Physical Activity

0-----

CONTENTS

o_____

- **03** Foreword
- **05** Introduction
- 10 Section 1. Delivering impact through SME legacy
- 22 Section 2. FIFA World Cup Qatar 2022 health legacy the Qatar experience
- **32** Section 3. Conclusion and recommendations
- **33** Acknowledgments
- **34** References

FOREWORD

0-

Sports mega-events (SMEs) attract millions of viewers worldwide and generate considerable excitement in host cities and countries. In recent years, hosts have made concerted efforts to harness this momentum to deliver lasting event legacies across a variety of domains, including health. Promoting public health messaging, particularly around increasing physical activity (PA) and participation, is a commonly cited goal; yet research linking the hosting of SMEs to increased levels of physical activity is mixed at best.^{1,2} It is also unclear whether this lack of evidence is due to ineffective approaches, insufficient assessment of these strategies, or both.

Building on the WISH 2020 report *Stepping up to the plate: Planning for a lasting health legacy from major sporting events*,³ this report focuses on the opportunity of SME legacy to improve health by increasing participation in PA locally and globally.

We begin by summarizing the health benefits of PA and sport participation at the population level, outlining the case for action. We discuss how SME legacy activities can impact behavior change to increase participation in PA, drawing on scientific evidence, research on past SMEs and the World Health Organization (WHO) Global Action Plan on Physical Activity (GAPPA) 2018-2030. We present a framework for the design and implementation of an SME legacy to maximize the impact of participation in PA, building on lessons learned from previous events. We then focus on Qatar's experience in preparing for the FIFA World Cup Qatar 2022™ (FWC22) and its progress to date in planning and delivering a public health legacy which encourages greater PA and sport participation locally.

The report concludes with a number of key recommendations to progress and develop global knowledge, scale the potential health impact of SMEs, and support effective planning and delivery of SME legacy for future events. We hope that this report will serve as a call to collective action by governments, sports authorities, and the wider sporting community to use the momentum and excitement generated by SMEs to promote better health for years to come.





Sheikh Dr Mohammed Bin Hamad Al-Thani Director, Public Health Department, Ministry of Public Health, Qatar



Hongi W

Professor Fiona Bull Head, Physical Activity Unit, World Health Organization



 \mathcal{V} , \mathcal{L}

N Sultana Afdhal Chief Executive Officer, World Innovation Summit for Health (WISH)





Professor Javaid Sheikh Dean, Weill Cornell Medicine-Qatar

R.Mamtani

Professor Ravinder Mamatani Vice Dean for Population Health and Lifestyle Medicine, Weill Cornell Medicine-Qatar

INTRODUCTION

Physical activity and health

Maintaining a healthy population is a key goal for governments and health systems around the world, and increasing physical activity (PA) is a crucial step toward achieving this goal.⁴ Though not a cure-all, regular PA and sport have a positive impact on health and wellbeing in multiple ways. Regular PA has been shown to reduce the risk of myriad non-communicable diseases including coronary heart disease, diabetes, certain cancers, obesity, and to delay the onset of Alzheimer's disease and dementia.^{5,6} This benefit is of particular importance for health systems, given that non-communicable diseases cause 71 percent of worldwide deaths each year – including more than 15 million premature deaths for those aged 30 to 69 years – and are projected to result in an estimated \$47 trillion loss to the global economy between 2010–2030.^{7,8}

Box 1. What do we mean by PA and sport?

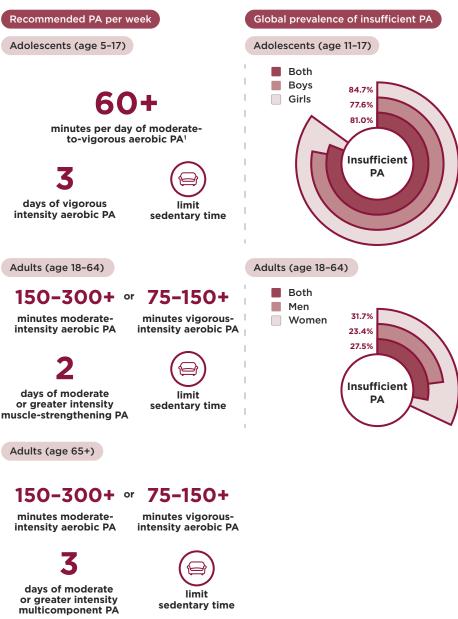
Sport and PA, while interrelated, have different definitions and may have specific connotations depending on how they are viewed (by the sport or health sector, for instance).

The World Health Organization (WHO) defines PA as "any bodily movement produced by skeletal muscles that requires energy expenditure".⁹ Sport is defined as "all forms of physical activity that contribute to physical fitness, mental well-being and social interaction, such as play, recreation, organized or competitive sport, and indigenous sports and games".¹⁰

In this report, we use 'PA' and 'PA and sport' to mean increasing population-wide PA and participation in community sport. In line with WHO's work in this field, this definition incorporates activities such as walking or cycling for recreation or transport, sports, active recreation and play.

Furthermore, regular PA has a positive impact on mental health by improving cognitive function, prosocial behavior and self-esteem, and reducing the impact of depression and anxiety.¹¹⁻¹³ PA and sport benefit all age groups – from young children to older people – and increasing PA generates benefits regardless of age or ability.^{14,15}





1: Moderate PA is defined as individual exertion of 5-6 on a scale of 1-10; vigorous PA is a 7-8. Source: WHO (2020);¹⁶ Guthold (2018, 2020).^{17,18}

Despite the clear health and wellbeing benefits of PA, many people do not meet the WHO-recommended levels required for good health (see Figure 1). One in four adults and four in five adolescents globally are not active enough; there has also been little change in the average levels of PA over the last 15 years.^{19,20} While worrying, these statistics point to a sizeable opportunity to positively affect health through increasing PA levels, including through sport.

The COVID-19 pandemic has negatively affected participation in PA and sport on a global scale.²¹ Evidence suggests that PA levels may have dropped significantly during the pandemic, and the lasting impact of this

06

decrease is yet to be seen.²² While some countries adapted quickly – developing online resources and re-opening in-person participation when safe – it is now more important than ever that we work collectively to build back better, ensuring that we increase efforts to engage more people in regular PA and sport.²³

The role of community and professional sport

In 2020, a United Nations (UN) Secretary-General report reaffirmed the importance of sport in the "promotion of tolerance and respect and the contributions it makes to the empowerment of women and vulnerable social groups, individuals and communities as well as to health, education and social inclusion objectives."²⁴ Sport is widely recognized as important to achieving the UN's Sustainable Development Goals (SDGs) and wider development and peace goals, including the Commonwealth goals of democracy and development.^{25,26} Grassroots sport has a key role in providing local opportunities for PA and engaging communities, providing strong social and cultural connections at local, national and international levels.

Professional sport reaches and inspires millions of fans and spectators worldwide, creating an important opportunity to engage more people in PA and sport. The world's leading sport, football (or soccer), reportedly has more than 3.5 billion global followers and 250 million players.²⁷ Cricket, the second most popular sport, has an estimated 2.5 billion viewers and 200 million players, although mostly concentrated in 20 or so countries.²⁸ These sports (and others) appeal to people of all ages, and a recent global survey found that 58 percent of adults surveyed wanted to participate in more sport.²⁹

SMEs and legacy

Sports mega-events (SMEs) are defined as "fixed-duration and costly international competitions that are organized by a special authority over defined development and promotion (pre-hosting) and post-hosting time periods, which yield the highest levels of media coverage and impacts for the host community."³⁰ They can reach huge numbers of people, from existing fans to new spectators. The FIFA World Cup, along with multi-sport events such as the Olympic Games and Paralympic Games (summer and winter), Commonwealth Games, World Student Games (Universiade), World Games, Pan American Games and Asian Games are considered to be the top international sporting events based on athlete and spectator attendance, media coverage and largest economic impact.³¹ For

example, it is estimated that the FIFA World Cup Qatar 2022[™] (FWC22) will attract between 4–5 billion spectators in attendance, traditional broadcasting and online streaming of the event across four weeks.³²

What is an SME legacy?

As host nations often spend billions of dollars preparing for and hosting SMEs,³³ deliberate planning for sporting event legacies is an important consideration. Event legacies are the intended and unintended outcomes that hosting an event initiates or accelerates.³⁴ Host governments, bid committees, and event owners as well as sport governing bodies are all increasingly focusing on delivering successful events and leaving a lasting impact across a variety of domains. These areas usually include economic, urban regeneration, social and education, sport and health as well as soft power – the ability to shape the preferences of others through appeal and attraction.³⁵

Why focus on increasing PA?

Promoting an increase in sport and PA participation is understandably one of the most frequently cited ambitions for legacy from hosting mega sport events.³⁶

In 2018, a global target to increase participation in PA by 15 percent was set as part of the World Health Assembly's endorsement of WHO's Global Action Plan on Physical Activity (GAPPA) 2018-2030, aligned with the UN's 2030 Agenda for Sustainable Development, particularly Goal 3 for good health and wellbeing.³⁷ GAPPA provides guidance to all countries on how to increase participation in PA and outlines 20 recommended effective policy actions, which can be implemented as a 'whole of system' approach to achieve four strategic objectives (see Figure 2). It also sets priorities on addressing inequalities in access to opportunities to be active, and to reduce the gaps in participation, particularly between men and women.

Promoting increased PA through sport is a key GAPPA recommendation, as is the opportunity to leverage and evaluate the contribution of SME legacy initiatives. The next section of this report uses the four key GAPPA objectives to frame the approach to promoting PA as part of an SME legacy.

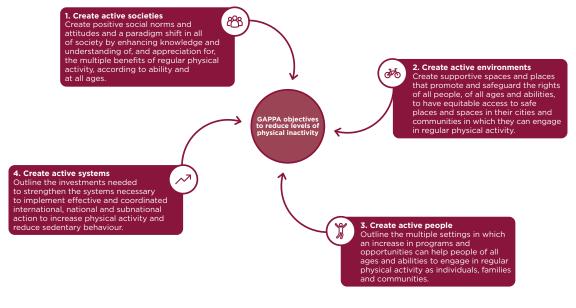


Figure 2. GAPPA objectives to reduce levels of physical inactivity

Source: WHO (2018).38

Our scope

The WISH 2020 report *Stepping up to the plate: Planning for a lasting health legacy from major sporting events* outlined the major health and public health challenges in hosting SMEs.³⁹ The report provided a framework for host countries to leverage these events to impart a lasting health and public health legacy. This report builds on that effort, focusing specifically on the opportunity of SME legacy to improve health by increasing participation in PA locally and globally.

This report does not address the role of SMEs in achieving other important global health objectives – including reducing tobacco and alcohol consumption, achieving healthy diets, or using sport to address wider issues related to addressing racism, gender equity, or safeguarding. These issues – while undoubtedly important to consider in a comprehensive SME health legacy – are complex and warrant dedicated reports to investigate them fully. We also do not include issues related to the hosting of safe and secure SMEs, of which much has been learned over the COVID-19 pandemic through the successful hosting of Tokyo 2020 and Beijing 2022 and is outlined in other publications.^{40,41}

SECTION 1. DELIVERING IMPACT THROUGH SME LEGACY

"There is an inherent appeal, and often unchallenged acceptance of the natural alignment between hosting a sports mega-event and its effect on increasing participation in sport and physical activity. But too often this has not been shown..."

Fiona Bull, Head, Physical Activity Unit, WHO, 2022

Sport and physical activity legacy

Increasing participation in sport and PA have become core components of SME legacy bids. However, there is no global standard, or clear operational definition, of what a legacy to increase PA should involve. The specific legacy requirements set by different SME organizing authorities for host cities and countries is varied. Moreover, there are no standard metrics or methods to assess SME legacy planning, delivery or long-term impact.

This chapter elaborates a framework to support authorities that are planning or assessing SME legacy initiatives to increase the population's PA. It also provides examples to learn from recent and past practice.

Strategic activities

There is an inherent appeal, and often unchallenged acceptance of the natural alignment of hosting an SME and its effect on increasing participation in sport and PA. However, too often this has not been shown or it is not possible to show the impact of SMEs on changing population levels of sport and PA. To establish credible evidence between SMEs and increased sport and PA participation we need a standard frame-work that describes what strategic activities should be implemented, when, and by whom.

Table 1 recommends four strategic activities to influence population-level PA, building on other broad SME legacy guidance.^{42,43} These activities align with the four strategic objectives outlined by WHO in the GAPPA.⁴⁴ Taken together, they represent a comprehensive and socioecological approach to encourage participation and behavior change.

Table 1. Recommended strategic activities of an SME legacy to promote population levels of sport and PA

GAPPA strategic objectives	Supporting strategic activities for SME legacy	Examples of specific SME legacy actions
Create active societies	Promote physical activity and sport	Conduct sustained public education communication campaigns (before, during and after the SME) on the benefits of, and opportunities for, PA and sport participation. Communications should be tailored to identified target populations, which can include the community as well as professional audiences, using:
		SME venues and fan zones during events.
		 Sport governing bodies, sports leagues, sports clubs, players, and coaches. SME volunteers and fan groups.
		 Key settings such as schools, workplace and community groups.
		Conduct media training to ensure that SME coverage is inclusive and incorporates promotion of PA and community sports participation to all ages.
		Engage SME partners and stakeholders to conduct promotional activities and ensure alignment of key messages encouraging participation in PA and community sport while avoiding conflict of interest.
Create active environments	Improve infrastructure and access to facilities	Ensure that development of sports facilities and urban infrastructure for an SME are integrated as part of wider strategic urban design plans and improvements. Increase access and availability of equitable and inclusive places and opportunities to play sport and be physically active by:
		• Ensuring new or renovated existing sport facilities provide affordable and equitable use by grassroots and community groups post SME, aligned with minimizing environmental impact.
		 Improving provision and access to public open spaces, including parks, in local communities as well as around SME venues, for community sport, active recreation, fitness and exercise for people of all ages and abilities.
		• Increasing access to public transport systems to ensure equitable access to sports facilities and venues.
		 Improving street networks to support safe walking and cycling for active recreation, as well as a form of sustainable transport.
		 Improving provision, design and standards for sport and PA facilities in key settings such as childcare, schools, higher education, workplaces, and other community venues.

GAPPA strategic objectives	Supporting strategic activities for SME legacy	Examples of specific SME legacy actions
Create active people	Create programs to encourage participation for all	Strengthen provision and promotion of inclusive sport and PA programs and opportunities for all ages through provision of:
		 Quality physical education, physical literacy and school sport programs, for children of all ages and abilities. Community-based sport programs, particularly for girls, women and older adults.
		 Tailored opportunities for people living with disabilities (and their carers) to participate in sport and PA. Primary healthcare services to promote and support patients to engage in PA and community-based sports and exercise.
Create active systems	Nurture long-lasting change through policy and collaboration	Ensure sustainability and accountability across the legacy lifespan by integrating implementation within policy context and establish shared ownership and responsibility. This can include:
		 Strengthening national and city policy and strategies related to sport (especially community/grassroots sport), PA, walking and cycling.
		 Setting time-bound national/city targets for increasing levels of participation.
		• Comprehensively evaluating legacy through enhanced monitoring and data systems that ensure consistent, integrated tracking and reporting of sport and PA participation levels and other legacy impacts.
		 Investing in strengthening the sports and PA workforce and encouraging ownership of SME legacy initiatives across all relevant levels and sectors.
		• Expanding partnership and ensuring co-ordination between government and non-government stakeholders, to advocate, fund and effectively deliver SME legacy initiatives, particularly to prioritized communities.
		• Strengthening research and encouraging innovation on community sport and PA participation.

It is important to note that there is no single intervention that can effectively change levels of PA because barriers to people participating in sport and PA differ depending on individual, sociodemographic, cultural, environmental and economic contexts. Increasing sport and PA requires addressing these diverse constraints using multiple policy actions and interventions delivered by government and non-government agencies at different levels of influence (local, city and national) and all tailored to a country's cultural and economic context. SMEs can act as a catalyst for cities, nations and regions to start and scale strategies aimed at increasing community sport and PA. The International Olympic Committee, for example, announced its Olympism 365 strategy which aims to use sport to support the UN Sustainable Development Goals through improving access and ensuring opportunities to benefit from sport, among other activities.⁴⁵

Strategic activities for SME legacy: Learning from past experience

"Staging a global 'games' is a red flag to many host cities who are scared off by the high cost and risk involved. We have to offer more than an event."

Transformation 2022 Refresh, Commonwealth Sport⁴⁶

Figure 3. Strategic activities of an SME legacy to promote population levels of sport and PA



Promote participation in PA and sport

Global interest and extensive media coverage of SMEs provides a valuable opportunity to initiate and scale community-wide promotional campaigns to encourage community-based sport and PA. Due to their unprecedented reach to large national and international audiences, SMEs are an ideal vehicle to directly convey health messages to participants, spectators and volunteers. SMEs can also reach a wider network through sports and fan club memberships. The large number of service providers and supply chains can also engage and offer strategic opportunities to spread health messages through appropriate partners. Educational and engagement campaigns to promote community sport and PA should use multiple communication channels and should start before the event itself and continue well after it concludes. Athletes and sports coaches can be powerful influencers and their voices can be harnessed to reach fans, spectators and the wider community.^{47,48} However, it is currently not known how different SME communication campaigns work best to increase new participation among those who are least active. Surprisingly, there is little robust scientific evidence on the effective delivery of campaigns through SME⁴⁹ and this knowledge gap is therefore a key research priority.

Despite gaps in evidence, known principles of successful social marketing apply and include the need for a good understanding of the target audience and alignment of the right messages with clearly defined outcomes. For example, the Birmingham 2022 Commonwealth Games legacy developed resources showing the health benefits of 19 sports with signposting to specific local opportunities.⁵⁰

Improve infrastructure and access to facilities

Hosting an SME involves ensuring that adequate sport venues, athlete and visitor accommodation and transport systems are in place. Most SME legacy plans include ambitions – even 'promises' – to ensure that these facilities benefit local communities after the event. In addition, the investment in improving the area around sports event venues creates an opportunity to develop a sustainable transport system and provide more spaces for community sport and other forms of PA. For example, creating, improving or extending walking and cycling networks ensures more people can make short trips safely or use these networks for active recreation. As safety is the number one reason why people do not walk and cycle when given a choice, these improvements are important and should ensure the integration of separated cycling and walking networks within urban regeneration and development plans.

Improving urban infrastructure and transport networks has been a major focus of most SME host cities including the Olympic Games in Los Angeles 1984, Barcelona 1992, Sydney 2000 and London 2012. These agendas are also a key feature of the Paris 2024 Summer Olympics legacy program, which is integrated with the city's long-term agenda to increase walking and cycling for health as part of achieving the '15-minute city', a concept where all neighborhood facilities are within a 15-minute walk, bike ride, or public transport journey^{51,52} (see Case study 1).

Create programs to encourage participation for all

Nearly all SME legacies include the launch of new sport initiatives to encourage participation, particularly programs delivered through schools and sports clubs. Schools are often seen as the best way to engage young people, with legacy initiatives sharing teaching materials and conducting sport, exercise and fitness challenges through physical education classes and after-school programs. Sports clubs are key providers of sporting opportunities outside schools, and clubs and coaches often partner with school sport programs.

The legacy of the Beijing 2022 Winter Olympic Games included initiatives in schools, clubs and the community. Despite the Games' legacy being severely affected by the COVID-19 pandemic and response, which imposed stringent movement restrictions and closed schools for many months, the Organizing Committee still managed to report their short-term impact (see Case study 1).

Partnerships with community organizations can also be a key avenue for encouraging participation in harder-to-reach groups (see Case study 1).

Although there is frequent reporting of these kinds of activities within SME legacy, there is a paucity of evidence on their effectiveness. Post-SME evaluation reports are often limited to sharing data on the delivery and uptake of programs, but very little is known about the effects on overall sport and PA participation over longer timeframes.⁵³⁻⁵⁷

Nurture long-lasting change through policy and collaboration

A successful SME legacy cannot be viewed as a set of one-off events. Changing attitudes, increasing sports participation and creating the right environment to promote regular PA requires long-term interventions, sustained investment and thoughtful policymaking.

However, there is surprisingly limited sharing of SME legacy impact, and, therefore, we have limited evidence on how past SMEs have effected policy change to deliver long-term outcomes and impact, particularly on physical activity. Learning from previous SMEs, both what worked and what didn't, is essential to avoid continued reinvention and repetition of mistakes and missed opportunities.

To encourage and direct SME event organizers and hosts to intensify their legacy efforts, the International Olympic Committee and the Commonwealth Games Foundation have in recent years updated their bid processes to strengthen delivery of SME legacy and included requirements for clear articulation of legacy plans for increasing PA and community participation in sport (see Case study 1). Establishing this requirement in the bidding process and selection criteria is a recommended lever that can increase attention and quality of legacy planning and delivery. Other international sports federation and SME organizations should consider adopting similar event-hosting requirements.

CASE STUDY 1. LESSONS FROM STRATEGIC ACTIVITIES FOR SME LEGACY



O

1. Promote participation in PA and sport: Beijing 2022 Winter Olympics, China

Source: International Olympic Committee;⁵⁸ Beijing Organising Committee for the 2022 Olympic and Paralympic Winter Games.⁵⁹

The legacy program for the Beijing 2022 Winter Olympics had an ambitious goal of encouraging 300 million people to engage with ice and snow sports. Efforts began alongside preparation for the Games, with the Beijing 2022 organizing committee working closely with central and local governments. By February 2022, before the Games had finished, they had already surpassed their goal.

The Beijing 2022 education program was part of the host's wider efforts to encourage its citizens to participate in winter sports. A curriculum was developed that incorporated knowledge and history, practical classes for beginners and an introduction to becoming a winter sports coach. Winter sports clubs were set up in schools across the country. By the end of 2021, more than 2,800 schools had integrated winter sports knowledge and activities into their curriculum.

2. Improve infrastructure and access to facilities: Paris 2024 Summer Olympics, France

Source: Paris 2024 (2022).60

Paris 2024 has committed to be the first Olympic Games fully aligned with the UN Framework Convention on Climate Change Paris Agreement, supported by the Paris 2024 Clean Transport Policy. Initiatives include: 100% of spectators traveling to venues by public transport, bike or walking; free access to the Paris transport system for ticket holders; and a zero-emission bus fleet in service during the Games.

As part of the comprehensive legacy of Paris 2024 Summer Olympics, sports facilities have been designed to be used by the public after the event.

Other urban improvements include the integration of the Games' sustainability strategy with the cycling and walking network. Paris has invested in doubling the number of cycle lanes along the Seine to encourage the public to take up regular cycling and walking, including after the sports events have finished.

3. Create programs to encourage participation for all: Birmingham 2022 Commonwealth Games, England

Source: Birmingham 2022 Commonwealth Games (2022).61

Birmingham City Council is working in partnership with Sport England to deliver its Commonwealth Active Communities program in five wards in the city where the highest levels of inactivity overlap with the highest levels of deprivation. Activities are being co-designed with communities to ensure that they are tailored to their needs.

The Active Wellbeing Society delivered about 70 Active Streets events across Birmingham during the Commonwealth Games period. For a time, cars were removed from the community and replaced with activities, engagement and neighborhood gatherings.



4. Nurture long-lasting change through policy and collaboration: Commonwealth Games Foundation

The Commonwealth Sport Movement's 2026–2030 Strategic Roadmap⁶² invites future hosts to explore innovative concepts, including co-hosting, and encourages mass participation events as part of enhancing health and wellbeing. International Federations are encouraged to propose new sports/disciplines to drive growth and youth engagement. Through ongoing consultation, the Roadmap provides hosts with more flexibility to propose new sports alongside the longstanding athletics and swimming programs. New additions should be relevant to the host nation, show-case culturally important sports, and increase community engagement. For example, the Gold Coast 2018 Commonwealth Games in Australia included Beach Volleyball and Women's Rugby Sevens for the first time, and Birmingham 2022 included T20 Cricket and 3x3 Basketball.

The Commonwealth Games Foundation has established an impact framework aimed at defining, assessing, communicating, and ultimately driving the positive impact that the Games have on diverse societies, economies and physical environments. An integrated approach to economic, social and environmental development, measured through the Organisation for Economic Co-operation and Development's Better Life Initiative, supports and extends communal prosperity.⁶³

Planning to deliver

"Just as the Games took 10 years to win, plan and deliver, so legacy must be seen as a 10-year project to realise lasting change."

Lord Sebastian Coe, Olympian and Chairman of the British Olympic Association, 2013⁶⁴

Plan early, plan well

There is a growing body of literature and multiple frameworks on SME legacy, and an emerging set of consistent features and recommendations for host cities and countries.⁶⁵⁻⁶⁷ The most common elements have been summarized in Table 2.

Table 2. Seven key elements to delivering a successful SME legacy for sport and physical activity

	Strategic plan with time-bound objectives	Develop a unified, co-created legacy plan including clear time-bound objectives and targets, timelines and measurable key performance indicators. This is expected for delivery of the SME and should be done with same level of detail and oversight for the SME legacy. Setting realistic, measurable and time-bound objectives on community sport and physical activity is central to providing clear focus and legacy outcomes. The planning process should include an <i>a priori</i> assessment of what policies and programs already exist and ensure that SME legacy initiatives are integrated within the wider policy frameworks to avoid duplication of programs and campaigns.
Ů	Leadership and co-ordination	Establish leadership and clear co-ordination of the multiple stakeholders necessary to deliver a collective legacy. This requires a dedicated SME legacy leadership team, clear allocation and understanding of responsibilities, and effective mechanisms for co-ordination, collaboration, and accountability across sectors and levels of operation (eg, city, state, national).
	Engage partners, media and communities	Include and implement comprehensive and meaningful community engagement processes to ensure that local communities in the host city and other targeted communities (nationally and internationally, where appropriate) are engaged in co-creation across the SME legacy lifecycle (design, planning, delivery/implementation and evaluation). This may require building community capacity to engage and contribute, and ensuring that the media are well informed and aligned as they shape public opinion and political support.

	Build capacity and ownership	Integrate education and training of young people, volunteers and all SME legacy stakeholders to build long-term capacity through knowledge and skills in health, sport and physical activity. Develop and maintain a shared understanding among all stakeholders of the legacy objectives and lifecycle.
\bigcirc	Monitor and evaluate	Establish and implement a robust monitoring and evaluation plan to assess the short-, medium- and long-term impacts of SME legacy. Strengthen and align data collection systems, data sharing agreements and use of agreed metrics aligned with legacy objectives. Share learning on progress to inform legacy planning and other SME legacy teams.
	Build knowledge, research and innovation	SME legacy should be informed by and contribute to building knowledge of sport's contribution to health and wellbeing. Include initiatives to strengthen institutional research capacities on sport and health as well as put this research into practice locally and internationally.
Ø	Sustainable funding	Secure adequate funding for SME legacy initiatives and evaluation across the lifecycle, including dissemination of results and learning.

One of the core recommendations is that the SME legacy must be planned as thoroughly as the bid and delivery of the SME itself.⁶⁸ This often does not happen, with detailed legacy planning and funding mechanisms deferred to just months, or at best one to two years, before an event. This limits the time available to assemble stakeholders, consult with communities, assess needs, gather data and develop coordinated implementation plans and evaluations, all of which are key elements to success. 'Start early' was the simple and clear message identified in WISH report 2020⁶⁹ and remains a core recommendation of this report. Further, sustainable funding mechanisms are required to sustain legacy activities and their evaluation.

The legacy from an SME is not a one-off task or set of activities just undertaken within the time window of the sport event itself. It requires conceptualizing, planning and execution over the SME lifecycle. Realizing lasting health impacts from a sport event starts with defining the legacy ambitions and objectives, and this should commence within the bidding process and extend years, even decades after the event itself.

Demonstrating impact

"Those cities and nations hosting, or considering hosting major sport events, are seeking tangible proof of social and economic returns on their investments."

Eamonn O'Roake, former Deputy Head of Leisure at Manchester City Council, 2022⁷⁰

The impact of hosting an SME is under increasing scrutiny due to their complex demands, high costs and environmental impacts. Delivering the promised returns on investment to a host city and communities is vital for governments and the sport ecosystem. However, despite the almost universal acceptance that SME legacy should deliver health benefits, there is a dearth of evidence to support and quantify impact on community sport and PA on a population level. Some observers question if the purported impact of SME on PA is 'reality or just rhetoric'.⁷¹

Although studies of SMEs have increased in recent years, the majority of available evidence concludes that both single and multi-sport megaevent legacies remain poorly evaluated and the knowledge base remains scant in important areas. Most of the evidence on the impact on PA levels is from relatively small-scale, often poorly designed, and short-term (less than five years) SME evaluations.⁷²⁻⁷⁵ As a result, there have been calls for more robust and longer-term population-level evaluations. Even when legacy evaluations are published, assembling all the relevant evidence is difficult because it is published in a variety of places across diverse disciplines – from peer-reviewed journals to government reports and private sector analyses. A systematic assessment of all available evidence, incorporating knowledge from across different disciplines, such as health, sport management, leisure studies and social policy, on SME legacy to increase sport and PA would be valuable to inform policy and practice.

Critically, the planning of future SME legacy programs would be aided by new and more robust studies, using reliable and valid research tools, appropriate study designs and applicable methods for sampling population-level changes. In particular, there is a need for agreement on what outcomes and impacts should be assessed, and the use of common metrics would vastly improve the evidence base. Work on this agenda is underway, led by the Organisation for Economic Co-operation and Development (OECD) to support the implementation of recommendations on global events and local development. It is forecast to provide a valuable indicator framework applicable to multiple contexts and sports events as well as cultural mega-events.⁷⁶

SECTION 2. FIFA WORLD CUP QATAR 2022 HEALTH LEGACY -THE QATAR EXPERIENCE

Qatar is the first country in the Middle East to host the FIFA World Cup. This section summarizes Qatar's experience of designing a sport and physical activity (PA) legacy from hosting this event. It provides an overview of the approaches taken, including planning and co-ordination, strategic activities to support SME legacy and measuring impact.

Planning and co-ordination

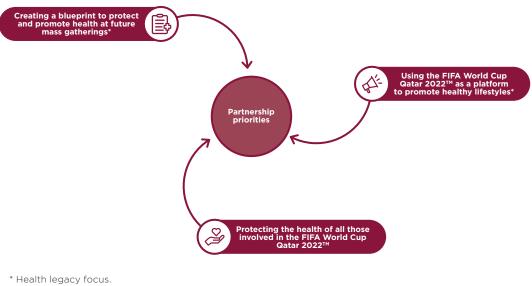
0-

After winning the bid to host the FWC22 in 2010, Qatar established the Supreme Committee for Delivery & Legacy (SC) to oversee construction of the necessary infrastructure for the tournament, to co-ordinate planning and operations with local stakeholders and to develop a lasting legacy beyond the event.⁷⁷

The SC is governed by a board headed by the Emir of Qatar. Other board members include representatives from government ministries – including Interior, Finance, Culture and Sports, Development Planning and Statistics, Transport and Communications, and Municipality and Environment – as well as the president of the Qatar Football Association and the president of the Qatar Olympic Committee.⁷⁸ The SC works closely with the Qatar 2022 Local Organizing Committee and FIFA on planning and operations. It also maintains a National Legacy Committee – which includes SC members and leaders from local organizations – that focuses solely on the event's human, social, economic, environmental and sporting legacy.⁷⁹

In October 2021, the State of Qatar, World Health Organization (WHO), and FIFA also launched a three-year partnership (Healthy 2022 World Cup – Creating Legacy for Sport and Health) to promote health during the event and to establish a lasting legacy beyond the tournament, focusing on three areas (as outlined in Figure 4).⁸⁰

Figure 4. Healthy 2022 World Cup – Creating Legacy for Sport and Health



Source: WHO (2022).⁸¹

This partnership will complement the legacy activities of the SC, with initial health promotion priority actions 82 including:

- Promoting participation in sport and physical activity.
- Healthy foods options in stadiums, fan zones and the local community.
- Strengthening tobacco prevention activities across venues and fan zones.
- Advancing national health promotion policy and systems, including healthy cities agenda.
- Information sharing with other event organizers, such as future single and multiple sport mega events.

Strategic activities for FWC22 legacy

Building on the framework outlined in Section 1, the following subsections outline the actions taken to date within the four recommended strategic activities for SME health legacy for the FWC22. These actions support the four broader GAPPA strategic objectives for health legacy.

Promote participation in PA and sport

Using the FWC22 to promote uptake of healthy lifestyles among Qatari citizens and residents is an essential component of the event's health legacy. Several local organizations have leveraged enthusiasm for the upcoming event to encourage PA. For example, since 2012, Weill Cornell Medicine-Qatar has run Sahtak Awalan: Your Health First (YHF), a comprehensive health campaign which aims to encourage, inspire and

empower people to lead healthy lifestyles in line with the Qatar National Vision 2030. In partnership with Qatar Foundation, Ministry of Public Health, ExxonMobil and various government ministries, YHF reaches out to the community through traditional and social media, website, school visits, radio and television spots and pop-up booths and activity stations at national events to share information about healthy living, sustainability, exercise and nutrition. YHF's most recent innovation in partnership with the Ministry of Municipality, the Fitness Box, has installed solar-powered workout stations crafted from upcycled shipping containers in public parks across Doha. YHF has more than: 3 million views on its YouTube channel, 230,000 fans on Facebook, 70,000 followers on Instagram, and 40,000 followers on Twitter.⁸³

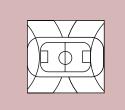
The Healthy 2022 World Cup – Creating Legacy for Sport and Health partnership will also have a strong focus on engaging youth in being more active, using digital tools and social media campaigns, activation of the new facilities and precincts post event, and strengthening the partnership and national policy frameworks on sport and PA. In addition, activities include raising awareness of the importance of PA with key messages on how PA can support health more broadly, including mental health.⁸⁴ These campaigns will continue throughout the World Cup, with plans to extend beyond the event itself to spread the message of 'Health for All'.⁸⁵

Improve infrastructure and access to facilities

Strategic investment in infrastructure and a well-designed environment have a demonstrable impact on population health – increasing PA, preventing premature mortality, and reducing costs associated with physical inactivity.⁸⁶ Qatar invested in public transportation infrastructure, including its first metro and tram system.⁸⁷ The latter has three metro lines spanning 37 metro stations across 76 kilometers, greatly increasing accessibility to World Cup stadiums and exercise venues, while reducing the need for private car transport.⁸⁸ Qatar has also constructed 'walk-able neighborhoods', with cycling lanes and pedestrian paths.⁸⁹ These are designed to be inclusive and accessible to people with different degrees of mobility – for instance, all 37 metro stations are wheelchair accessible – and those who are visually challenged.⁹⁰

In preparation for the World Cup events, Qatar constructed seven stadiums, in addition to renovating an existing stadium, with designs inspired by different cultures and symbols in the country. In line with construction of the new stadiums, there has been a sustained drive to enhance community sporting facilities, recreational areas and green spaces around these areas to improve public health.⁹¹ Figure 5 outlines the community benefits of the World Cup stadiums and their surrounding infrastructure.

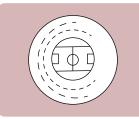
Figure 5. FWC22 stadiums and community benefits



Al Bayt Stadium

For the stadium: Boutique hotel, sporting venue, community facilities

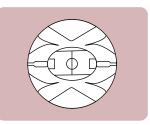
For the precinct: Public park with tracks for running, cycling and horse riding; football pitches, parks and play areas



Al Thumama Stadium

For the stadium: Home of two local football teams, Aspetar sports medicine clinic

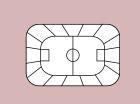
For the precinct: Energy innovation research facility; football pitches; jogging and cycling tracks



Al Janoub Stadium

For the stadium: Home of football team Al Wakrah Sports Club

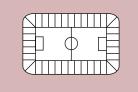
For the precinct: Public park with fitness equipment, running track, football training pitches



Ahmad Bin Ali Stadium

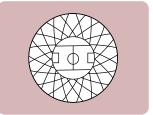
For the stadium: Home of football team Al Rayyan Sports Club and sporting venue

For the precinct: Football and cricket pitches, tennis courts and other community facilities



974 Stadium

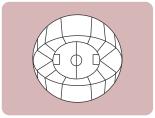
For the stadium: Modular venue that will be disassembled and donated to low- and middle-income countries



Lusail Stadium

For the stadium: Various non-football related options

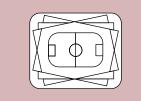
For the precinct: Public park with fitness equipment, running track, football training pitches



Khalifa International Stadium

For the stadium: Qatar National Stadium, main athletics stadium in the country and home of Qatar men's national football team

For the precinct: Aspetar sports medicine hospital, sport academy, aquatics centre, football pitches, multi-pupose sports, complex, hotels



Education City Stadium

For the stadium: Home of Qatar women's national football team, stadium for Education City needs and host for national and international football matches

For the precinct: Two schools, sports facilities for surrounding universities Stadiums incorporate a number of features designed for health benefits during and after the games. There are dedicated bicycle tracks near building entrances and crossings, which provide a healthier option for moving from different locations during and after the World Cup games.

After the FWC22, non-modular sports venues will be utilized nationally for various local events to continue promoting health and physical activity (as shown in Figure 5). The 974 Stadium will be disassembled and donated to select low- and middle-income countries.

Create programs to encourage participation for all

Since winning the bid to host the World Cup, Qatar has launched a number of programs aimed at increasing participation in sport and PA. The Qatar Sports for All Federation, run by the Ministry of Sports and Youth, aims to increase the number of sports across genders and various age groups. Its 365 Active Program features daily sports activities for all age groups, including outdoor training sessions under the supervision of professional coaches. Training sessions take place daily from 5pm to 6pm, with women-only sessions running from 6pm to 7pm. To date, nearly 15,000 people have participated, with approximately 30 to 50 participants attending each day.⁹³

In partnership with local organizations, the SC has launched a number of amateur football initiatives involving more than 10,000 players from over 70 countries.⁹⁴ The Workers' Cup, run by the SC and the Qatar Stars League, encourages participation among migrant workers. In 2019, over 600 players participated, and the final match attracted more than 10,000 spectators.⁹⁵ The Qatar Community Football League has grown to four men's divisions, four boys' divisions and two girls' leagues. A women's league was under development in collaboration with the Qatar Women's Sport Committee and the Qatar Football Association, but delayed due to the COVID-19 pandemic.

Specifically targeting children, Koora Time, an initiative created by Qatar Shell and Qatar Football Association, aims to improve the health of local 7-16-year-olds through football. The program draws on FC Barcelona Foundation's FutbolNet methodology and provides children with extra-curricular physical education each year.⁹⁶

Additionally, the SC – in partnership with the Ministry of Education and Higher Education Schools Sport Programme – runs Generation Amazing, its flagship corporate social responsibility program. The initiative, described in further detail in Case study 2, uses football to drive social change, increase access to sports, and enhance community integration in Qatar and internationally.⁹⁷



Launched in 2010, Generation Amazing uses a 'football for development' approach to teach gender equality and inclusivity, as well as life skills such as communication, organization, teamwork and leadership. It targets disadvantaged and marginalized communities, in Qatar and across the world.

Internationally, Generation Amazing has reached more than 750,000 young people in nearly 30 communities in countries including Brazil, Haiti, India, Jordan, Lebanon, Nepal, Oman, Pakistan, the Philippines, Russia, Rwanda, Syria and the UK.

Ultimately, the initiative aims to empower young people through sport to create positive change in their community, while contributing to the UN Sustainable Development Goals.

Source: SC (2022).98

Nurture long-lasting change through policy and collaboration

The ultimate goal of the SC's legacy program is to ensure long-lasting change beyond the event. Work is underway to ensure that national policies effectively promote health, and that partnerships are leveraged to maximize the impact of these policies. This is supported by the 'Health in All Policies' system-wide priority within the National Health Strategy 2018–2022, which promotes an intersectoral approach to policy and health improvement.

The B4Development Foundation (B4D) – launched by the SC in 2016 (formerly known as the Qatar Behavioral Insights Unit) applies behavioral insights and 'nudge' approaches to policy challenges, including health promotion. B4D is one of the main programs aimed at supporting the World Cup health legacy (see Case study 3 for more information).⁹⁹

The Healthy 2022 World Cup – Creating Legacy for Sport and Health partnership also aims to ensure long-lasting change through communication campaigns and community-based programs across its three-year lifespan. Both B4D and Generation Amazing will support different projects included in the partnership.¹⁰⁰

O-

CASE STUDY 3. B4DEVELOPMENT FOUNDATION

B4D is the first behavioral insights unit in the Middle East. The Supreme Committee for Delivery & Legacy launched the foundation to leverage behavioral insights to develop evidence-based solutions for key policy challenges related to the World Cup legacy, including promoting healthy lifestyles among citizens, as well as wider challenges in the country. B4D develops and designs a range of behavior-based programs spanning capacity building, research dissemination and knowledge exchange.

Since 2016, B4D has conducted more than 70 experiments, ranging from enhancing craft and manual workers' grievance reporting system and to promoting healthy eating. In the run-up to the FWC22, experiments have included encouraging recycling at football matches, reducing littering at football stadiums and increasing physical activity among Qatari residents.

B4D works closely with Generation Amazing to enhance the effectiveness of its football for development program. Several experiments have been conducted to boost attendance of the Generation Amazing Youth Festival and to increase commitment and discipline among students participating in Generation Amazing programs.

Source: B4D (2022).¹⁰¹

Measuring impact

The SC has undertaken an interim assessment of the impact of its legacy activities, including those related to sports and health. The results are positive thus far.¹⁰²

Many of the community programs launched in the years leading up to the World Cup have proven popular. The Qatar Sports for All Federation has garnered nearly 15,000 participants, while amateur football leagues, such as the Supreme Committee Football League, have engaged more than 10,000 citizens. YHF's health promotion campaigns have reached a wide-ranging audience, and citizens have begun to enjoy the new facilities, parks, and cycling paths constructed as part of event preparations.

A final impact assessment will be released in early 2023, and it will incorporate the results from the four-week event.

As this report goes to print, the FWC22 has not taken place. Therefore, it is not yet possible to report the full impact of the event's health legacy. An overall assessment will require longer-term tracking and reporting, potentially five to ten years after the event in 2022. As a start, a multisectoral assessment of national PA policy using the WHO GAPPA Situation Analysis Tool was undertaken in June 2022 to help inform forthcoming national policies, including on PA, sport and the Qatar National Health Strategy 2030. This exercise will be repeated in three years to monitor changes in PA levels across the country.

Lessons learned and conclusion

The FWC22 provides a unique opportunity to develop, nurture and support SME initiatives and programs that will ultimately further encourage healthy lifestyle behaviors, and promote wellbeing and quality of life for people in Qatar and beyond. As the tournament approaches, it is an opportune time to reflect on the accomplishments achieved so far and what has yet to be completed to ensure an effective health legacy.

Lessons learned include:

• An early focus on legacy is essential: SME committees are increasingly considering legacy planning when assessing bids from host countries and cities. Legacy activities should begin on day one, and should be overseen by a dedicated team. The SC's strong focus on legacy

and activities over the last decade have enabled Qatar to launch a number of programs well in advance of the event, and continue to build momentum around its key goals.

- International and local collaborations ensure maximum impact: To ensure a lasting impact, legacy activities should involve external organizations with a remit well beyond the event. The SC has partnered with multiple government ministries, local organizations, and WHO to ensure that its legacy activities are embedded in the local and international health ecosystems.
- Accurate, comprehensive performance measurement is required to assess impact: While it is still too early to assess the impact of the FWC22 health legacy, an accurate picture will only be possible with comprehensive, wide-ranging data. It is essential that the SC and other stakeholders continue to track metrics, such as physical activity, before, during, and after the event. Of particular importance are well-established baseline metrics and performance measurements over time. Continued partnerships – at both the local and international levels – will also ensure that other host countries and cities can learn from Qatar's experience.

We hope that Qatar's experience provides a helpful starting point for host nations of future SMEs to build lasting health legacies.

SECTION 3. CONCLUSION AND RECOMMENDATIONS

O-

Host governments, event organizers and sport governing bodies are increasingly committed to creating lasting SME legacies across economic, urban development, education and health. While increasing sport and PA is often included in legacy plans, tangible results are rarely documented or achieved. This is a surprising collective omission across host cities, countries and sports organizations.

The systemic barriers to participation in PA and sport can't be resolved by a single event or by a single city. A lasting PA legacy can only be achieved through a collective effort of sport event owners and organizers, international sport federations, other sport entities and national governments.

To fulfill this ambition, it is imperative that these key stakeholders gather and share knowledge on the best strategies to deliver population-level impact on PA and sport participation. Therefore, we call on sport owners and organizers, international sport federations and entities, governments and interested stakeholders to:

- Review and revise the SME bid process and criteria to require and incentivize stronger planning and reporting on SME legacy impact, including a focus on increasing PA and sport participation.
- 2. Support the development of common indicators to assess SME legacy and strengthen the evaluation of SME impact on sport and PA at the population level in the short, medium and long term. Guidance and tools should be provided for collecting and tracking these metrics over a number of years to accurately gauge evidence of meaningful long-term change.
- **3. Support the demonstration of model evaluation frameworks in future SMEs** to test and refine evaluation methodology, and provide examples of best practices.
- 4. Build capacity and support knowledge transfer within and between sports events and all relevant sectors to strengthen the skills and competencies in planning, delivering and evaluating SME legacy aimed at increasing participation in community sport and PA.

Together, this global community of stakeholders vested in delivering the benefits of sport can harness the enthusiasm generated by SMEs to ensure a lasting health legacy for generations to come.

ACKNOWLEDGMENTS

0_____

The Forum advisory board for this report was co-chaired by:

- Sheikh Dr Mohammed Bin Hamad Al-Thani, Ministry of Public Health, Qatar
- **Professor Fiona Bull**, Physical Activity Unit, World Health Organization, Switzerland
- Professor Ravinder Mamtani, Weill Cornell Medicine-Qatar
- Professor Javaid Sheikh, Weill Cornell Medicine-Qatar

Sincere thanks are extended to the members of the advisory board of the WISH 2022 Forum on Mega Sport Events and Healthy Lifestyles, who contributed their unique insights to this paper:

- Dr Mahfoud Amara, College of Education, Qatar University, Qatar
- Dr Roberto Bertollini, Ministry of Public Health, Qatar
- Professor Khalid Bibi, Qatar University, Qatar
- Dr Sohaila Cheema, Weill Cornell Medicine-Qatar
- **Dr Samar Elfeky**, World Health Organization Eastern Mediterranean Regional Office, Egypt
- Dr Fadi Makki, B4Development, Qatar
- Professor Marco Cardinale, Aspetar, Qatar
- Mr Abdulrahman Musallam Al Dosari, Ministry of Sports and Youth, Qatar
- Dr Kamilla Swart-Arries, Hamad bin Khalifa University, Qatar

We also extend our thanks for the contributions to this report made by:

- Dr Amit Abraman, Weill Cornell Medicine-Qatar
- Ms Sultana Afdhal, WISH, Qatar
- Mr Abdulla Al-Mohannadi, WISH, Qatar
- Dr Karima Chaabna, Weill Cornell Medicine-Qatar
- Ms Hatoun Saeb, Ministry of Public Health, Qatar
- Dr Paul Simpson, BMJ, UK
- Ms Didi Thompson, WISH, UK

The authors alone are responsible for the views expressed in this report and they do not necessarily represent the views, decisions or policies of the institutions with which they are affiliated. Any errors or omissions remain the responsibility of the authors.

REFERENCES

0-

- Mahtani KR et al. Can the London 2012 Olympics "inspire a generation" to do more physical or sporting activities? An overview of systematic reviews. *BMJ Open.* 2013; 3, e002058.
- 2. MacAuley D. The health legacy of hosting major sporting events. *Canadian Medical Association Journal*. 2015; 187(17), 1267.
- World Innovation Summit for Health. Stepping up to the plate: Planning for a lasting health legacy from major sporting events; Qatar: WISH; 2020. Available at: https://www.wish.org.qa/wp-content/uploads/2021/08/045E.pdf [Accessed 4 July 2022].
- World Health Organization. WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020. Available at: https://www.who.int/publications/i/item/9789240015128 [Accessed 4 July 2022].
- Reiner M et al. Long-term health benefits of physical activity A systematic review of longitudinal studies. *BMC Public Health.* 2014; 13, 813.
- 6. Warburton D, Bredin S. Health benefits of physical activity: A systematic review of current systematic reviews. *Current Opinion in Cardiology*. 2017; 32(5), 541.
- 7. World Health Organization. Noncommunicable diseases. 2021. Available at: https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases [Accessed 4 July 2022].
- 8. Bloom D et al. *The Global Economic Burden of Noncommunicable Diseases*. Geneva: World Economic Forum; 2011.
- World Health Organization. Physical activity. 2020. Available at: https://www.who.int/news-room/fact-sheets/detail/physical-activity [Accessed 4 July 2022].
- 10. United Nations Inter-Agency Task Force on Sport for Development and Peace. Sport for development and peace: Towards achieving the millennium development goals: Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace. New York: United Nations; 2003. Available at: https://digitallibrary.un.org/record/503601?ln=en [Accessed 5 July 2022].
- **11.** Saxena S et al. Mental health benefits of physical activity. *Journal of Mental Health.* 2005; 14(5), 445.
- **12.** Smith PJ, Merwin RM. The role of exercise in management of mental health disorders: An integrative review. *Annual Review of Medicine*. 2021; 72, 45.
- **13.** Callaghan P. Exercise: A neglected intervention in mental health care? *Journal of Psychiatric and Mental Health Nursing.* 2004; 11(4), 476–483.
- Janssen I, Leblanc AG. Systematic Review of the Health Benefits of Physical Activity and Fitness in School-Aged Children and Youth. *International Journal of Behavioral Nutrition and Physical Activity.* 2010; 7, 40.

- **15.** Vogel T et al. Health benefits of physical activity in older patients: A review. *International Journal of Clinical Practice*. 2009; 63(2), 303.
- World Health Organization. WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020. Available at: https://www.who.int/publications/i/item/9789240015128 [Accessed 4 July 2022].
- Guthold R et al. Worldwide trends in insufficient physical activity from 2001 to 2016: A pooled analysis of 358 population-based surveys with 1.9 million participants. *The Lancet Global Health.* 2018; 6(10), 1077-1086.
- Guthold R et al. Global trends in insufficient physical activity among adolescents: A pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health.* 2020; 4(1), 23–25.
- Guthold R et al. Global trends in insufficient physical activity among adolescents: A pooled analysis of 298 population-based surveys with 1.6 million participants. *The Lancet Child & Adolescent Health.* 2020; 4(1), 23–25.
- **20.** Guthold R et al. Worldwide trends in insufficient physical activity from 2001 to 2016: A pooled analysis of 358 population-based surveys with 1.9 million participants. *The Lancet Global Health.* 2018; 6(10), 1077–1086.
- United Nations. Recovering better: Sport for development and peace Reopening, recovery and resilience post-COVID-19. 2020. Available at: https://www.un.org/ development/desa/dspd/wp-content/uploads/sites/22/2020/12/Final-SDPrecovering-better.pdf [Accessed 10 July 2022].
- 22. Park AH et al. Impact of COVID-19 on physical activity: A rapid review. *Journal of Global Health.* 2022; 12, 05003.
- 23. United Nations. *The impact of COVID-19 on sport, physical activity and well-being and its effects on social development.* 2020. Available at: https://www.un.org/ development/desa/dspd/2020/05/covid-19-sport [Accessed 10 July 2022].
- 24. United Nations Secretary-General. Sport: A global accelerator of peace and sustainable development for all: Report of the Secretary-General. New York: United Nations; 2020. Available at: https://digitallibrary.un.org/record/3879376?ln=en [Accessed 7 July 2022].
- 25. United Nations Inter-Agency Task Force on Sport for Development and Peace. Sport for development and peace: Towards achieving the millennium development goals: Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace. New York: United Nations; 2003. Available at: https://digitallibrary.un.org/record/503601?ln=en [Accessed 5 July 2022].
- 26. Commonwealth Secretariat. Sport for development and peace and the 2030 agenda for sustainable development. London: The Commonwealth; 2015. Available at: https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/migrated/inline/CW_SDP_2030%2BAgenda.pdf [Accessed 7 July 2022].
- **27.** Das S. Top 10 most popular sports in the world. *The Sports Browser*; 2022. Available at: https://sportsbrowser.net/most-popular-sports [Accessed 7 July 2022].
- **28.** Das S. Top 10 most popular sports in the world. *The Sports Browser*; 2022. Available at: https://sportsbrowser.net/most-popular-sports [Accessed 7 July 2022].

- Ipsos. Global views on exercise and team sports: *Ipsos Global Advisor*. 2021. Available at: https://www.ipsos.com/sites/default/files/ct/news/documents/2021-08/Global-Views-on-Sports-and-Exercise-Ipsos.pdf [Accessed 10 July 2022].
- **30.** Annear M et al. Can international sports mega events be considered physical activity interventions? A systematic review and quality assessment of large-scale population studies. *Sport in Society.* 2022; 25(4), 712–729.
- Sportcal. Global Sports Impact Report 2017. London: Sportcal Sports Marketing Intelligence. Available at: https://www.iba.sport/wp-content/uploads/2018/05/ GSI-Report-2017-Event-Analysis-AIBA.pdf [Accessed 10 July 2022].
- de Kretser L. Qatar World Cup audience projected at 5 billion, says FIFA boss. Reuters; 2022. Available at: https://www.reuters.com/lifestyle/sports/qatar-worldcup-audience-projected-5-bln-says-fifa-boss-2022-05-23 [Accessed 10 July 2022].
- **33.** Baade RA, Matheson VA. Going for the gold: The economics of the Olympics. *Journal of Economic Perspectives*. 2016; 30(2), 201–218.
- 34. International Olympic Committee. Legacy strategic approach: Moving forward. Lausanne: International Olympic Committee. 2017. Available at: https://stillmed. olympics.com/media/Document%20Library/OlympicOrg/Documents/Olympic-Legacy/IOC_Legacy_Strategy_Full_version.pdf [Accessed 10 July 2022].
- **35.** Thomson A et al. Sport event legacy: A systematic quantitative review of literature. *Sport Management Review.* 2019; 22(3), 295–321.
- **36.** Thomson A et al. Sport event legacy: A systematic quantitative review of literature. *Sport Management Review.* 2019; 22(3), 295–321.
- World Health Organization. Global action plan on physical activity 2018-2030: More active people for a healthier world. Geneva: World Health Organization; 2018. Available at: http://apps.who.int/iris/bitstream/handle/10665/272722/978 9241514187-eng.pdf [Accessed 4 July 2022].
- World Health Organization. Global action plan on physical activity 2018-2030: More active people for a healthier world. Geneva: World Health Organization; 2018. Available at: http://apps.who.int/iris/bitstream/handle/10665/272722/978 9241514187-eng.pdf [Accessed 4 July 2022].
- 39. World Innovation Summit for Health. Stepping up to the plate: Planning for a lasting health legacy from major sporting events; Qatar: World Innovation Summit for Health; 2020. Available at: https://www.wish.org.qa/wp-content/ uploads/2021/08/045E.pdf [Accessed 4 July 2022].
- **40.** Nakanishi Y. Lessons learned from staging the Olympics during a pandemic. *Respirology*, 2022; 27(5). 331-332.
- **41.** Zhang Y et al. Lessons learned from the COVID-19 control strategy of the XXXII Tokyo Summer Olympics and the XXIV Beijing Winter Olympics. *Emerging Microbes & Infections*. 2022; 11(1), 1711–1716.
- **42.** Bauman AE et al. An evidence-based assessment of the impact of the Olympic Games on population levels of physical activity. *The Lancet Physical Activity.* 2021; 398(10298), 456–464.

36

- **43.** Khan KM et al. Sport and exercise as contributors to the health of nations. *The Lancet*; 2012; 380(9836), 59–64.
- World Health Organization. Global action plan on physical activity 2018-2030: More active people for a healthier world. Geneva: World Health Organization; 2018. Available at: http://apps.who.int/iris/bitstream/handle/10665/272722/978 9241514187-eng.pdf [Accessed 4 July 2022].
- 45. International Olympic Committee. Olympism 365: Strengthening the role of sport as an important enabler for the UN Sustainable Development Goals. 2022. Available at: https://olympics.com/ioc/news/olympism-365-strengthening-the-roleof-sport-as-an-important-enabler-for-the-un-sdg [Accessed 20 August 2022].
- 46. Commonwealth Sport. Transformation 2022 refresh: Strategic plan (2019-2022); 2019. Available at: https://thecgf.com/sites/default/files/2019-10/CGF_TRANSFORMATION%2022_BROCHURE_FINAL_16-08-19_LOW%20RES.pdf [Accessed 7 July 2022].
- Union of European Football Associations. Strength through unity: Football sustainability strategy 2030. Nyon: Union of European Football Associations; 2021. Available at: https://editorial.uefa.com/resources/0270-13f888ffa3e5-931c 597968cb-1000/uefa_football_sustainability_strategy.pdf [Accessed 4 July 2022].
- **48.** Fuller CW et al. 'FIFA 11 for Health' for Europe. 1: effect on health knowledge and well-being of 10- to 12-year-old Danish school children. *British Journal of Sports Medicine*. 2017; 51, 1483–1488.
- **49.** Grix J et al. State strategies for leveraging sports mega-events: unpacking the concept of 'legacy'. *International Journal of Sport Policy*. 2017; 9(2), 1–16.
- 50. Birmingham 2022 Commonwealth Games. Our legacy. Birmingham: Birmingham 2022 Commonwealth Games. 2022. Available at: https://resources.cwg-qbr.pulse live.com/qbr-commonwealth-games/document/2022/07/12/a37f0633-361d-49b1-9cca-d25043dccff8/Birmingham-2022_Our_Legacy.pdf [Accessed 25 August 2022].
- **51.** Paris. Paris ville du quart d'heure, ou le pari de la proximité. 2022. Available at: https://www.paris.fr/dossiers/paris-ville-du-quart-d-heure-ou-le-pari-de-la-proximite-37 [Accessed 4 July 2022].
- **52.** Transformative Urban Mobility Initiative. *The 15-minute City*. Available at: https://www.transformative-mobility.org/assets/publications/TUMI_The-15-Minute-City_2021-07.pdf [Accessed 4 July 2022].
- **53.** Annear MJ et al. Can international sports mega events be considered physical activity interventions? A systematic review and quality assessment of large-scale population studies. *Sport in Society.* 2022; 25(4), 712–729.
- **54.** Preuss H. Event legacy framework and measurement. *International Journal of Sport Policy and Politics*. 2019; 11(1), 103–118.
- 55. Annear MJ et al. Sports mega-event legacies and adult physical activity: A systematic literature review and research agenda. *European Journal of Sport Science*. 2019; 19(5), 671-685.

- Bauman AE et al. An evidence-based assessment of the impact of the Olympic Games on population levels of physical activity. *The Lancet Physical Activity*. 2021; 398(10298), 456-464.
- 57. Khan KM et al. Sport and exercise as contributors to the health of nations. *The Lancet.* 2012; 380(9836), 59–64.
- 58. International Olympic Committee. In China, millions of children to carry forward the Beijing 2022 Olympic flame. 2022. Available at: https://olympics.com/ioc/ news/in-china-millions-of-children-to-carry-forward-the-beijing-2022-olympicflame [Accessed 7 July 2022].
- 59. Beijing Organising Committee for the 2022 Olympic and Paralympic Winter Games (ed). Legacy report of Olympic and Paralympic Winter Games: Beijing 2022 (pre-Games). Beijing: Beijing Sport University. Available at: https://library.olympics.com/Default/doc/SYRACUSE/734943/legacy-report-of-olympic-and-paralympic-winter-games-beijing-2022-pre-games-beijing-organising-commi?_ga=2.79425684.1819563292.1660164899-923497509.1660164899#avis_lecteurs [Accessed 7 July 2022].
- **60.** Paris 2024. *Games that respond to society's current challenges*. 2021. Available at: https://medias.paris2024.org/uploads/2022/01/PARIS-2024-210831-Rapport-Dura bilite-et-Heritage-SYNTHESE-VENG_compressed.pdf [Accessed 16 August 2022].
- **61.** Birmingham 2022 Commonwealth Games. *Our Legacy Summer 2022*. Available at: https://resources.cwg-qbr.pulselive.com/qbr-commonwealth-games/document/ 2022/07/12/a37f0633-361d-49b1-9cca-d25043dccff8/Birmingham-2022_Our_ Legacy.pdf [Accessed 7 July 2022].
- Commonwealth Sport. Transformation 2022 refresh: Strategic plan (2019-2022); 2019. Available at: https://thecgf.com/sites/default/files/2019-10/CGF_TRANSFORMATION%2022_BROCHURE_FINAL_16-08-19_LOW%20RES.pdf [Accessed 7 July 2022].
- **63.** Organisation for Economic Co-operation and Development. *Measuring well-being and progress*. Paris: OECD Statistics and Data Directorate; 2020. Available at: www.oecd.org/sdd/OECD-Better-Life-Initiative.pdf [Accessed 7 July 2022].
- 64. HM Government. Inspired by 2012: The legacy from the London 2012 Olympic and Paralympic Games: A joint UK Government and Mayor of London report. 2013. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/ uploads/attachment_data/file/224148/2901179_OlympicLegacy_acc.pdf [Accessed 7 July 2022].
- 65. Organisation for Economic Co-operation and Development. Implementing the OECD recommendation on global events and local development: A toolkit. Paris: Organisation for Economic Co-operation and Development; 2021. https://www.oecd.org/cfe/leed/Implementing-the-OECD-Recommendationon-Global-Events-Toolkit.pdf.
- **66.** Preuss H. Event legacy framework and measurement. *International Journal of Sport Policy and Politics*. 2019; 11(1), 103–118.

- **67.** Bauman AE et al. An evidence-based assessment of the impact of the Olympic Games on population levels of physical activity. *The Lancet Physical Activity.* 2021; 398(10298), 456–464.
- **68.** Preuss H. Event legacy framework and measurement. *International Journal of Sport Policy and Politics*. 2019; 11(1), 103–118.
- **69.** World Innovation Summit for Health. *Stepping up to the plate: Planning for a lasting health legacy from major sporting events*; Qatar: World Innovation Summit for Health; 2020. Available at: https://www.wish.org.qa/wp-content/uploads/2021/08/045E.pdf [Accessed 4 July 2022].
- 70. World Health Organization. WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organization; 2020. Available at: https://www.who.int/publications/i/item/9789240015128 [Accessed 4 July 2022].
- Bauman AE et al. An evidence-based assessment of the impact of the Olympic Games on population levels of physical activity. *The Lancet Physical Activity*. 2021; 398(10298), 456-464.
- **72.** Annear M et al. Can international sports mega events be considered physical activity interventions? A systematic review and quality assessment of large-scale population studies. *Sport in Society.* 2022; 25(4), 712–729.
- **73.** Preuss H. Event legacy framework and measurement. *International Journal of Sport Policy and Politics*. 2019; 11(1), 103–118.
- 74. Bauman AE et al. An evidence-based assessment of the impact of the Olympic Games on population levels of physical activity. *The Lancet Physical Activity*. 2021; 398(10298), 456-464.
- **75.** Khan KM et al. Sport and exercise as contributors to the health of nations. *The Lancet.* 2012; 380(9836), 59–64.
- 76. Organisation for Economic Co-operation and Development. Implementing the OECD recommendation on global events and local development: A toolkit. Paris: Organisation for Economic Co-operation and Development; 2021. https://www.oecd.org/cfe/leed/Implementing-the-OECD-Recommendationon-Global-Events-Toolkit.pdf.
- 77. Supreme Committee for Delivery and Legacy. About us. 2022. Available at: https://www.qatar2022.qa/en/about [Accessed 9 August 2022].
- **78.** Supreme Committee for Delivery and Legacy. FAQs. 2022. Available at: https://www.qatar2022.qa/en/about/faq [Accessed 9 August 2022].
- **79.** Supreme Committee for Delivery and Legacy. *Legacy book*. Edition one. 2016. Available at: https://www.qatar2022.qa/sites/default/files/SC-Legacy-Book-EN.pdf [Accessed 15 June 2022].
- 80. World Health Organization. WHO, Qatar, FIFA leaders agree actions to promote health at FIFA World Cup Qatar 2022[™]. 2022. Available at: https://www.who.int/ news/item/01-04-2022-who-qatar-fifa-leaders-agree-actions-to-promote-health-at-fifa-world-cup-qatar-2022 [Accessed 9 August 2022].

- 81. World Health Organization. WHO, Qatar, FIFA leaders agree actions to promote health at FIFA World Cup Qatar 2022[™]. 2022. Available at: https://www.who.int/ news/item/01-04-2022-who-qatar-fifa-leaders-agree-actions-to-promote-healthat-fifa-world-cup-qatar-2022 [Accessed 9 August 2022].
- 82. World Health Organization. WHO, Qatar, FIFA leaders agree actions to promote health at FIFA World Cup Qatar 2022[™]. 2022. Available at: https://www.who.int/ news/item/01-04-2022-who-qatar-fifa-leaders-agree-actions-to-promote-health-at-fifa-world-cup-qatar-2022 [Accessed 9 August 2022].
- Sahtak Awalan. Your Health First. 2022. Available at: https://sahtakawalan.com [Accessed 9 August 2022].
- **84.** World Health Organization. Healthy FIFA World Cup Qatar 2022: Creating legacy for sport and health. 2022. Available at: https://www.who.int/initiatives/sports-and-health/healthy-2022-world-cup [Accessed 9 August 2022].
- **85.** Qatar Moments. Measures to promote health in the World Cup 2022. 2022. Available at: https://www.qatarmoments.com/measures-to-promote-health-in-the-world-cup-2022-468288.html [Accessed 9 August 2022].
- **86.** Brownson RC et al. Measuring the built environment for physical activity: State of the science. *American Journal of Preventive Medicine*. 2009; 36(4 Suppl), S99–123.e12.
- **87.** We Build Value. Qatar's infrastructure projects for the 2022 World Cup. *We Build Value Digital Magazine*, 2018. Available at: https://www.webuildvalue.com/en/global-economy-sustainability/qatar-100-billion-on-world-cup-infrastructure.html [Accessed 20 June 2022].
- **88.** Qatar Rail. Facts and Figures. 2022. Available at: https://www.qr.com.qa/metro-tram?code=FactsAndFigures [Accessed 9 August 2022].
- 89. Tribune News Network. Ashghal to construct 2,650 km of cycling, pedestrian paths by 2022. *Qatar Tribune*. 26 August 2020. Available at: https://www.qatar-tribune.com/news-details/id/196519/-ashghal-to-construct-2-650-km-of-cycling-pedestrian-paths-by-2022 [Accessed 12 March 2022].
- **90.** FIFA. Accessibility. Available at: https://publications.fifa.com/en/sustainability-report/social-pillar/accessibility/accessibility-overview [Accessed 13 March 2022].
- 91. Abilash V. A complete list of all the must-visit parks in Qatar. ILoveQatar.
 28 September 2021. Available at: https://www.iloveqatar.net/guide/places/ ten-beautiful-parks-to-visit-in-gatar [Accessed 12 March 2022].
- **92.** Supreme Committee for Delivery and Legacy. *Economic, Social, Human and Environmental Impact Assessment Report*; 2022. Doha: Supreme Committee for Delivery and Legacy. Forthcoming.
- Qatar Sports For All. Activities. 2022. Available at: http://qasportsforall.com/ activities [Accessed 10 August 2022].
- **94.** Supreme Committee for Delivery and Legacy. *Economic, Social, Human and Environmental Impact Assessment Report*; 2022. Doha: Supreme Committee for Delivery and Legacy. Forthcoming.

- **95.** Supreme Committee for Delivery and Legacy. Workers' Cup; 2022. Available at: https://www.qatar2022.qa/pt/node/2723 [Accessed 10 August 2022].
- **96.** Koora Time. 2022. Available at: https://www.kooratime.qa [Accessed 10 August 2022].
- **97.** Supreme Committee for Delivery and Legacy. Generation Amazing; 2022. Available from: https://www.qatar2022.qa/en/opportunities/generation-amazing [Accessed 10 August 2022].
- **98.** Supreme Committee for Delivery and Legacy. *Economic, Social, Human and Environmental Impact Assessment Report*; 2022. Doha: Supreme Committee for Delivery and Legacy. Forthcoming.
- **99.** B4Development. About us. 2022. Available at: http://b4development.org/about [Accessed 10 August 2022].
- **100.** World Health Organization. Healthy FIFA World Cup Qatar 2022: Creating legacy for sport and health. 2022. Available at: https://www.who.int/initiatives/sports-and-health/healthy-2022-world-cup [Accessed 9 August 2022].
- B4Development. About us. 2022. Available at: http://b4development.org/about [Accessed 10 August 2022].
- **102.** Supreme Committee for Delivery and Legacy. *Economic, Social, Human and Environmental Impact Assessment Report*; 2022. Doha: Supreme Committee for Delivery and Legacy. Forthcoming.

WISH RESEARCH PARTNERS

O



WISH gratefully acknowledges the support of the Ministry of Public Health



42



www.wish.org.qa