



Expo 2023 Doha

Sustainability Progress Report



Developed By:



The events we celebrate have the power to bring transformative change, unite diverse communities and shape a brighter future for all.

Expo 2023 Doha Sustainability Progress Report

Developed by:

On behalf of:





Message from MoM



His Excellency Dr. Abdullah bin Abdulaziz bin Turki Al Subaie Minister of Municipality

We are confident that Expo 2023 Doha will leave a lasting positive impact on both the environment and the future of sustainable event management.

Qatar, a nation committed to sustainable development, has consistently prioritized the preservation of the environment for all generations. This dedication is deeply ingrained in the country's national constitution, which strives to maintain environmental equilibrium. Moreover, Qatar National Vision 2030's comprehensive framework places the environment as one of its four key pillars of sustainable development.

Qatar's strong commitment to sustainability is further exemplified by its proactive approach to international agreements. The country has submitted its Nationally Determined Contributions (NDCs) to align with the Paris Agreement, showcasing its resolve to mitigate climate change and reduce 25% of its greenhouse gas (GHG) emissions by 2030. To achieve these targets, the State has launched Qatar National Environment and Climate Change Strategy (QNE) as well as Qatar National Climate Change Action Plan 2030 (NCCAP), emphasizing its comprehensive approach to addressing environmental challenges.

All these efforts reflect Qatar's unwavering dedication to sustainability across various sectors, including events and tourism. The FIFA World Cup Qatar 2022™ was a remarkable demonstration of sustainable event management. The tournament embraced innovative sustainability practices, leaving a lasting positive impact on the environment.

Building on the positive environmental legacy established by Qatar 2022, the International Horticultural Expo 2023 Doha has made a strong commitment to uphold the sustainability benchmarks set by the State of Qatar. Recognizing the impacts of mega events, Expo 2023 organizers are ensuring sustainability across all stages including planning, construction, operations and dismantlement. By aligning with the nation's sustainability goals, the International Horticultural Expo 2023 Doha aims to showcase not only the beauty of horticulture but also the potential of sustainable event management.

We commend Expo 2023 Doha organizers for their ambitious endeavor to create a truly sustainable event. We are confident that the Expo 2023 Doha will leave a lasting positive impact on both the environment and the future of sustainable event management.

Message from Expo 2023



Mohammed Al-Khoury

Secretary General of the International Horticultural Expo 2023 Doha

I am delighted to present this sustainability report for Expo 2023 Doha, which is the first International Association of Horticultural Producers (AIPH)-approved A1 World Horticultural Expo to be held in the Middle East.

Expo 2023 holds significant importance for Qatar as it reinforces the country's pioneering role in hosting such an esteemed event in the MENA region. Qatar has made remarkable strides in its agricultural sector, focusing on the dual challenge of reducing water and electricity consumption while increasing production. Expo 2023 perfectly aligns with Qatar's vision, creating a platform where we can showcase the tremendous progress we

have achieved. Through the implementation of alternative techniques, we have successfully reduced the irrigation requirement for crops and trees by an astounding 70%. Furthermore, the use of soil conditioners has significantly contributed to water conservation efforts. Our research on native plants has also unveiled their remarkable ability to thrive with minimal watering, sometimes even surviving an entire year with a single dose. This knowledge empowers us to gather in-depth information about these plants, amplifying their cultivation and impact. All this, along with many other examples of horticultural stewardship, will be showcased at the upcoming expo.

Expo 2023 will act as a catalyst for change, inspiring visitors with initiatives and technologies that reflect sustainability.

Guided by the theme of "Green Desert, Better Environment," sustainability lies at the very core of Expo 2023, permeating every stage of planning, preparation, operations and delivery. Our commitment to sustainability extends beyond mere rhetoric; it is ingrained in our actions. This report serves as a continuation of Expo 2023's ongoing efforts to lead by example, illustrating our dedication to advocacy and the actualization of sustainable practices.

Expo 2023 will act as a catalyst for change, inspiring visitors with initiatives and technologies that reflect sustainability.

Together, we will explore innovative agricultural techniques, cutting-edge

advancements and enlightening exhibitions. As we immerse ourselves in this horticultural celebration, we aim to ignite a passion for sustainable living, empowering individuals and communities to make a lasting difference.

I invite you to delve into the pages of this sustainability report and witness the remarkable achievements and progress made in our pursuit of a sustainable future. Expo 2023 is not merely an event advocating sustainability; it is a platform where sustainability thrives and flourishes, leaving an indelible mark on the world.

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Message from GORD



Dr. Yousef Alhorr

Founding Chairman, GORD Sustainability Advisor for Expo 2023 Doha

Expo 2023 is strategically planned to focus on the crucial role of sustainability and green initiatives in line with Qatar National Vision 2030.

The State of Qatar is a proud host of the International Horticultural Expo 2023 Doha – an event which is expected to attract three million visitors from 80 countries showcasing and experiencing innovative solutions aimed at supporting and encouraging horticultural stewardship. With the theme of "Green Desert, Better Environment," Expo 2023 is strategically

planned to focus on the crucial role of sustainability and green initiatives in line with Qatar National Vision 2030 that prioritizes environment among its four key pillars.

While the event will be an opportunity for countries and organizations to share their expertise, promote cross-cultural exchange, and engage in partnerships that address global challenges related to agricultural practices, sustainability and environmental preservation, Expo 2023 will also provide an ideal platform for Qatar to showcase its potential and achievements in the sustainability milieu. A part of this massive undertaking is capturing the event's sustainability journey through a series of sustainability reports.

The Gulf Organisation for Research & Development (GORD) is honored to be a part of this journey by assisting Expo 2023 organizers in implementing and reporting on the sustainability requirements set by the International Association of Horticultural Producers (AIPH). This report is a part of a series of publications aimed at documenting the sustainability performance of Expo 2023 from planning and preparation to the implementation, operations and delivery of the event.

In the planning stage, Expo 2023's
Sustainability Strategy and Legacy Plan
outlines the sustainable practices and
initiatives envisioned to minimize the Expo's
environmental impact and leave a positive
legacy. In addition to the above, GORD is also
responsible for the overall sustainability
reporting for Expo 2023. This includes the
preparation of three reports: pre-event,
post-event and the post-event sustainability
and legacy report. These reports are aimed

at documenting the sustainability practices and initiatives undertaken at Expo 2023, and assessing their impact on the environment and local community in the long run. Lastly, Expo 2023 Management Systems report documents the processes and systems to ensure that Expo 2023 is managed in a sustainable manner.

By providing a transparent account of the initiatives implemented, challenges faced and outcomes achieved, these sustainability reports do not only document the event's contribution to addressing climate challenges but also inspire and enable future events and organizations to learn from the best practices of Expo 2023.

xpo 2023 Doha

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About the Host Country

Expo 2023 Doha will be the first International Horticultural Exhibition to be held in the Gulf region. Situated on the northeastern coast of the Arabian Peninsula, Qatar occupies a strategically important location in the context of global events. Bordered by the Gulf of Bahrain to the west, the Persian Gulf to the east, and Saudi Arabia to the south, the country is located halfway along the western coast of the Gulf and spread over 11,000 **square kilometers**, benefitting from its strategic location that is halfway between Europe and Asia. Being a link between the East and West with easy accessibility from some of the world's major cities has made Qatar a preferred destination for investors and entrepreneurs. It is, hence, no surprise that despite being a relatively small country, Qatar has emerged as a vibrant and dynamic player in hosting global events, leaving a lasting mark on the international stage.

Recognizing the need to ensure a comfortable and enjoyable experience for participants, Qatar has made significant investments in developing state-of-the-art infrastructure, venues and accommodation

facilities. Its commitment to providing worldclass venues and amenities is rooted in the understanding that seamless logistics and accessible locations are essential for delivering a successful global event.

Over the years, the country has undertaken several ambitious infrastructure projects strategically developed to meet urban needs while simultaneously supporting and boosting the nation's tourism and events industry. These projects have been instrumental in enhancing connectivity, facilitating transportation and creating world-class facilities for visitors and residents alike. The country has advanced its aviation and maritime means of transportation, and is now easily accessible from over 100 major cities around the world. This makes Qatar an ideal destination for businesses, events and investment projects in various fields.

By investing in cutting-edge facilities, transportation networks and logistical capabilities, Qatar has achieved remarkable success in organizing various global events, establishing itself as a prominent host on the world stage.

From the 15th Asian Games in 2006, and most notably, the FIFA World Cup Qatar 2022TM, the country has consistently demonstrated its ability to host large-scale international gatherings. These initiatives have not only enhanced Qatar's international standing but also left a legacy for future generations, enabling the country to continue attracting and hosting global events successfully.

Expo 2023 Doha represents another milestone in Qatar's ongoing commitment to hosting major global events with resounding success. Building upon previous achievements, Expo 2023 will continue Qatar's journey of delivering impactful gatherings on the world stage.



Qatar 2022™.

As the first International

by Qatar National Vision 2030,

economic, social, human and

environmental.

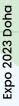
which emphasizes sustainability

Total area of Expo 2023's venue site

> Hosting an international horticultural expo within an arid climate for the first time is expected to have a profound impact and major legacy in Qatar, regionally and internationally. The event is planned to promote sustainable behaviors, increase environmental awareness, and advance green technologies for urban settings and arid regions.

To widen the reach of the event, the venue site selected for Expo 2023 Doha is spread across 1.7 millon sqm in a central location at the heart of Doha with close proximity to the country's business district.

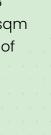






2023 Doha, besides being the first in

the region to host the FIFA World Cup



1.3 Mandate

Vision

Together we can plant a sustainable solution to global water, energy, and food scarcity problems.

Sustainability sits at the core of Expo 2023's mandate that sets the direction and establishes the vision, mission and values of the event.

Mission

To encourage, inspire and inform people about innovative solutions and the reduction of desertification.

Values

Innovation, Diversity,
Collaboration,
Inspiration and
Growth.

1.4 Purpose

Expo 2023 will address the challenges that hot desert countries face in desertification and sustainability and will constitute a new opportunity for developing agriculture and greening cities in Qatar and the Middle East region. In addition, it aims at inspiring visitors by proposing solutions to promote a prosperous green life in the desert through fruitful international cooperation and addressing four subthemes: Modern Agriculture, Technology and Innovation,

Environmental Awareness, and Sustainability. The Expo combines tradition and modern technology for a balanced use of resources.

Expo 2023 Doha strives to bring together people and ideas to speed up innovation, research and scientific progress in modern agriculture. The goal is to generate secure, sustainable and affordable food for the growing global population while minimizing the impact on the climate.

Grow the tools and use technology to cultivate a new and better future together.

Grow the knowledge to reconnect to nature and promote a greener development.

Grow the balance between local and global, planet and people, today and tomorrow.

Grow the resources to embrace science and experience for global sustainability.

Bring your thoughts and skills. Make it all fruitful. Tomorrow brings challenges and opportunities.



Growth starts with you.

You are the seed and the movement that will gather the world in Qatar.

1.5 Duration & Venue



The State of Qatar will host Expo 2023 Doha from 2 October 2023 until 28 March 2024. The State of Qatar will host Horticultural Expo
2023 Doha for 179 days starting from 2 October
2023 until 28 March 2024. It will be organized at
Al Bidda Park, located in the heart of Doha. The
event-linked activities and facilities will cover
the wider part of the Park located in close
proximity to Corniche Street, Msheireb
Downtown Doha and Souq Waqif. The venue site
comes with convenient transportation
connections through the Corniche and Al Bidda
metro stations. The Expo Project is delimited by
Khalifa Street on the North side, Al Istiqlal Street
on the West side, Al-Rayyan and Al-Diwan Street
on the South side, and Majlis Al Taawon Street on
the East side.

179 Days

Total duration of Expo 2023 Doha.

Al Bidda Park

Expo 2023's Organizing Committee, also

known as the National Committee, has

been established at the Ministry of

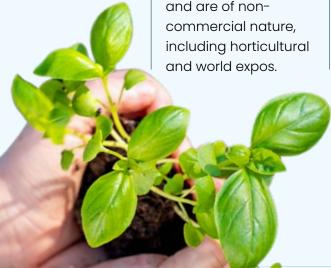
The successful delivery of Expo 2023 requires close coordination and collaboration between four main Expo organizers, listed below:



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The International Association of Horticultural Producers (AIPH) is responsible for approving the world's most exceptional horticultural expos creating long-lasting green legacies in cities across the globe.





Bureau International des Expositions

The Bureau International des Expositions (BIE) is an intergovernmental organization in charge of overseeing and regulating all international exhibitions that last more than three weeks and are of non-



Qatar's Ministry of Municipality is responsible for organizing and

supervising the

exhibition.



مبئــة الأشغــال العامـــة Public Works Authority

Qatar's Public Works Authority (Ashghal) is responsible for the development of the exhibition site.



Municipality, and includes representatives from the following national entities: Ministry of Interior

- Ministry of Foreign Affairs
- · Ministry of Finance
- · Ministry of Culture
- Ministry of Sports & Youth
- Ministry of Transport
- Ministry of Communications & Information Technology
- Ministry of Social Development & Family
- Ministry of Environment & Climate Change
- Ministry of Commerce and Industry
- Qatar Tourism
- Supreme Committee for Delivery & Legacy

In addition, the Expo 2023 organizers are working closely with a broad range of other stakeholders. Expo 2023, being a massive event, necessitates the coordination of multiple parties. Working collectively, these entities are collaborating on various aspects such as the design, construction and operation of the Expo buildings and facilities, as well as other areas including effective communication and seamless integration across all functions. The engaged companies are working together, pooling their expertise and resources, to bring Expo 2023 Doha's goals and objectives to life. The following organizational chart provides an overview of the Expo's organizational structure, showcasing the interconnected roles and responsibilities of the participating entities.



17 Stakeholders

Apart from organizers, Expo 2023 will be engaging with a range of stakeholders. Qatar aims to host a mega event that attracts the international community, with expected participation from more than 80 countries, along with international organizations, private sector representatives, NGOs and the general public. Due to the anticipated diversity of participants, from top decision-makers to families and children, Expo 2023 Doha is aiming to offer a multifaceted event where extraordinary exhibitions, diplomatic encounters, business meetings, public debates and live shows will take place.

80+

Number of countries expected to join Expo 2023.

3 Million+

Number of individuals expected to visit Expo 2023. The event is projected to welcome more than 3 million visitors, with guests welcomed from all around the world. Admission to the exhibition site will be free of charge for all visitors, offering them an exciting opportunity to enjoy the Expo's beautiful gardens, international area, activities and entertainment. Key stakeholders of Expo 2023 include:



Organizers

Entities that are responsible for planning, coordinating and managing all aspects of Expo 2023.



Sponsors

Organizations that are providing financial or other resources to support and promote Expo 2023.



Volunteers

Individuals who are offering their time and services willingly and without compensation to assist in the planning, organization and execution of Expo 2023.



Exhibitors

Entities that are participating in the Expo by showcasing their activities in pavilions, stands, booths or any other facilities.



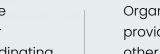
Visitors

Individuals who will be attending the Expo either by personal or professional interest, but are not part of the event organization, staff or volunteer group.



Government

As a host nation, Qatar government is a key stakeholder and organizer of Expo 2023, overseeing its planning, implementation and overall governance.



1.8 International Participation

35+

Number of pavilions Qatar is building to support least developed countries.

Emphasizing the sustainability theme of Equity and Inclusion, Expo 2023 Doha has taken significant steps to maximize international participation. The organizers have committed to developing more than 35 pavilions of Least Developed Countries (LDCs) free of charge, aiming to encourage their active involvement in the event. By removing the financial burden associated with pavilion construction, Expo 2023 seeks to create an inclusive platform that allows LDCs to showcase their unique cultural and sustainable contributions without barriers.

While the event is expected to host more than 80 countries along with a number of international organizations, representatives of the private sector, non-governmental organizations and the general public, more than 50 have been confirmed or approved as of May 2023.



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Green Desert, Better Environment

Modern

This subtheme deals with providing

innovation, research and scientific

3. Ensuring Coordinated Solutions

4. Promoting Permaculture

Agriculture



& Innovation

This subtheme deals with incorporating new techniques to enhance farming productivity and balance environmental sustainability. Technology and Innovation is considered a vehicle for future green solutions while playing an important role in changing the direction of the use of fossil fuels, creating

solutions for urban industrial pollution, and advancing alternatives for chemicalintensive agriculture.

In Expo 2023 Doha, Technology & Innovation will especially focus on the following four topics:

- 1. Hands-On Experience
- 2. Rainwater Harvesting
- 3. Alternative Energy Solutions
- 4. Urban Greenery and Urban Farming

Recent advancements in horticultural techniques and technologies are enabling the 'greening' of desert environments and land surfaces threatened by desertification. These innovations are increasingly critical to combat global water, energy and food scarcity problems. Successful results require strategic solutions through international cooperation, goal sharing, information exchange and technological innovation. To this end, Expo 2023 Doha will host avenues for RDI, knowledge sharing, capacity building and community awareness around four subthemes: Modern Agriculture, Technology and Innovation, Environmental Awareness, and Sustainability.



Environmental **Awareness**

This subtheme deals with raising global awareness to promote a long-term change in attitudes and behavior toward our shared environment. It is a tool for encouraging the protection of natural resources, raising a sense of connection to the natural world, and promoting environmental development.

In Expo 2023 Doha, Environmental Awareness will focus on the following areas:

- FoodPrint



Sustainability

Sustainability aims to maintain biodiversity and ecological balance while acknowledging the need for civilization to sustain its modern way of life. It strives to balance different local and global needs to transform lifestyles, business practices, and governmental policies that respect future generations by recognizing global environmental challenges.

In Expo 2023 Doha, Sustainability will focus on the following three areas:

- 1. Economic: Investing in innovative agricultural technologies.
- 2. Social: Establishing the connection of people with nature to raise awareness.
- 3. Environmental: Transforming dry, arid land into agricultural areas and forests.



i₁₀ Concept

Techniques that enable sustainable cultivation of trees and crops in arid lands play an important role in reversing desertification problems evident around the world.

The Green Desert idea has cultural, educational, economic, social and scientific aspects, combining traditional agricultural practices with modern and alternative techniques like hydroponics, permaculture The greening of deserts involves implementing sustainable practices such as irrigation and forestation in arid regions or areas adjacent to water sources like lakes, rivers, seas or oceans. It also emphasizes the

importance of promoting clean technologies like utilizing natural water sources for irrigation and adopting renewable energy supplies. However, the realization of the Green Desert idea relies on engaging people, garnering social support and fostering a cultural shift. Without a change in people's mindset and their outlook on the future, long-term sustainability in any endeavor would be unachievable.

Creating green deserts inevitably involves modern agriculture supported by technology and innovation, and enhanced by environmental awareness, in order to attain long-term sustainability. In the past, greening the desert was a challenge. With technological advancements, a green desert is possible. To achieve it and maintain it is an important and increasingly urgent topic because it can be an answer to global water, energy and food scarcity problems.



in Thematic Zoning

The total area of Al Bidda Park is approximately 1.7 million sqm. For Expo 2023 activities, the site has been divided into three distinctive areas, of which the Northern portion will host the international event. The remaining two zones will be used for a variety of cultural and entertainment activities, panel discussions and other complementary functions.

1) International Zone: The International Area at Expo 2023, spanning a vast total space of approximately 700,000 sqm, will serve as the gateway and central hub for international gardens, exhibitions and events. At the heart of this area is the Expo House, a purpose-built multifunctional building designed exclusively for the Expo. Within the Expo House, visitors can find a range of amenities, including an open events space, a prayer room and a café on the ground floor. Moving up to the first floor, there is a media center and offices, while the rooftop offers a terrace, an indoor restaurant and a garden. In addition, the International Area will have an Innovation Centre, housed in the site's second-largest existing building. The Innovation Centre will feature an exhibition space to host a diverse array of interactive events, showcasing cutting-edge advancements and ideas. The space will be designed to embrace the Expo theme and will have a dedicated area for children to learn more about the Expo's subthemes. The international area will include the following features:

- Wadi Natural Reserve: This is protected land and will be themed as the Grand Desert Park during the event.
- **Sports Area:** This area, already operative and complete with all the facilities and sports courts, will be at the disposal of visitors and users of the park, remaining exactly as it is.
- Qatar Museum Authority (QMA) Area: This area, centrally located within the project site, is





International Zone 700,000 sqm





3 Cultural Zone: The Cultural Zone at Expo 2023 has been planned as a space dedicated to cultural immersion and the showcasing of traditional activities and exhibitions. Covering a sprawling area of approximately 500,000 square meters, this zone is ideally situated on the southern zone of Al Bidda Park allowing close proximity to the historic core of Doha. Additionally, it will benefit from Al Bidda Park's onsite features, such as the Old Fort and Old Rocks, adding to the rich cultural heritage on display.

Alongside the areas dedicated to each thematic zone, Expo 2023 activities will be integrated within the wider Al Bidda Park and will be supported by the existing features, facilities and amenities, which include:

- Existing landscaped areas (softscape, hardscape, furniture) and all relevant infrastructures.
- Existing surface and underground car parking areas (approximately 4500 car spaces).
- Existing buildings including but not limited to toilet blocks, cafes and kiosks, restaurants, and utility buildings.
- Existing shading structures, children's play areas and water features.

The Natural Rock and Watchtower at Al Bidda Park

Host Country Qatar

Host City Doha

- Location
- Al Bidda Park
- Duration

179 DAYS 02 October 202 28 March 2024

Dates

02 October 2023 to

Theme

Green Desert, Better Environment

Area 1,700,000 sqm

International Area 70,000 sqm

reserved for the international participants

Expected Visitors

3,000,000

Participation

80 Countries

Expo Type Category A1 International Horticultural

Exhibition

Zones

Thematic Zones

- **Leading Government Entities**
- Ministry of Municipality
- Public Works Authority (ASHGHAL)
- Stakeholders
- Qatar Government, including:
- Ministry of Commerce & Industry
- Ministry of Culture
- Ministry of Finance
- Ministry of Interior
- Ministry of Social Development & Family
- Ministry of Sports & Youth
- Ministry of Transport
- Qatar Supreme Committee for Delivery & Legacy
- **Qatar Tourism**
- Qatar University
- University of Doha for Science and Technology
- Katara Cultural Village
- Qatar Airways







Expo2023Doha

Website

www.dohaexpo2023.gov.qa

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2.0

Sustainability in Qatar

- 2.1 Background
- 2.2 Key Sustainability Drivers
- 2.3 Green Buildings & Infrastructure
- 2.4 Renewable Energy
- ⇒ 2.5 Clean Transportation
- 2.6 Sustainable Events

Expo 2023 Sustainability Sustainability Sustainabile Sustainable Sustainable Sustainable Sustainable Transport Sustainable Operations Sustainability at a Glance In Qatar Expo 2023 Doha Hosting Venue Overlay Works & Mobility & Management Capacity Buildi

2.1 Background

In line with its commitments to the Paris Qatar has placed a strong emphasis on environmental To curb its carbon footprint, Qatar has Agreement, Qatar has developed Nationally launched several initiatives that span various sustainability, with a national focus on reducing Determined Contributions (NDCs) that cover key areas of sustainability. The country's greenhouse gas (GHG) emissions and promoting key mitigation areas. These NDCs outline green initiatives cover renewable energy, Qatar's specific targets and actions to clean transportation, sustainable building sustainable practices across various sectors. The country and construction, green events and more. reduce emissions, demonstrating the has set a target to cut down 25% of its GHG emissions by country's dedication to playing its part in The State's sustainability drive and climate global climate mitigation efforts. By change adaptation efforts have started the year 2030, demonstrating its commitment to addressing key areas of emissions reduction, bearing fruit, with an increasing number of combatting climate change and fostering a more Qatar is actively working towards a more government and private bodies adopting sustainable practices across all sectors. sustainable future. sustainable future. To achieve its climate ambitions, Qatar has released the Qatar National Climate Action Plan 2030 and the Qatar National Environment and Climate Change Strategy. These comprehensive plans outline the country's strategies and actions to address climate change and promote environmental sustainability. By working towards these plans, Qatar is showcasing its proactive approach to tackling climate change and its determination to implement effective measures. 40

The State of Qatar is taking greater responsibility for embracing sustainability from macro to micro levels, resulting in a significant knock-on effect on all fronts of economic and societal dimensions. Some of Qatar's key regulatory drivers of sustainability are summarized below.

2.2.1 Qatar Constitution

As per Article 33 of the Qatar Constitution, "The State shall preserve the environment and its natural balance in order to achieve comprehensive and sustainable development for all generations."

This constitutional provision reflects Qatar's recognition of the intrinsic value of a balanced ecosystem and its commitment to ensuring the wellbeing of both present and future inhabitants. By prioritizing environmental protection as a fundamental principle, Qatar emphasizes the importance of adopting policies, strategies and practices that promote conservation, mitigate climate change, preserve biodiversity and foster a sustainable approach to development. Through Article 33, Qatar establishes a strong foundation for responsible environmental governance and underscores its commitment to a sustainable future.

2.2.2 Qatar National Vision 2030

Qatar National Vision 2030 (QNV 2030) is a comprehensive plan that strives to elevate Qatar's status from a developed economy to an advanced country by the year 2030.



Built upon four fundamental pillars, QNV 2030 outlines a holistic approach towards achieving sustainable growth and prosperity. The Human Development pillar emphasizes the development of every individual, ensuring they have the necessary tools and resources to contribute to a thriving society. Social Development aims to foster a just and compassionate society, guided by high moral values, and actively engaged in global cooperation for progress. Economic Development focuses on building a competitive and diversified economy that can cater to the needs of the present and future generations, while providing a high standard of living for all citizens.

The fourth pillar of QNV 2030 is Environmental Development that underscores the importance of managing the environment in a manner that harmonizes economic growth, social progress and environmental preservation. This pillar emphasizes the need to pursue development initiatives that are environmentally sustainable, minimizing negative impacts on the natural ecosystem and promoting practices that preserve and enhance the environment for future generations. By integrating environmental considerations into the development process, Qatar aims to create a prosperous and resilient society that values and protects its natural resources.

2.2.3 Qatar National Environment and Climate Change Strategy

Qatar's National Environment and Climate Change Strategy (QNE) is a policy framework designed to preserve Qatar's environment for future generations. Launched in 2021, the strategy provides a comprehensive plan to address environmental and climate challenges in the country. By identifying five priority areas for action, namely greenhouse gas (GHG) emissions and air quality, biodiversity, water, circular economy and waste management, and land use, QNE lays the foundation for targeted efforts in each of these crucial domains. The strategy sets forth ambitious objectives to guide Qatar's journey towards environmental sustainability, aiming to protect and enhance the nation's natural surroundings while ensuring the wellbeing of its population and the long-term resilience of its economy.



2.2.5 Qatar Construction Specifications (QCS 2014)

Qatar Construction Specifications (QCS 2014) consolidate standardized technical guidelines, requirements and specifications that govern construction practices within Qatar. Referring to the Global Sustainability Assessment System (GSAS), v2.1 2013, Section 7 of QCS 2014 specifies minimum environmental performance requirements for new buildings' design, construction and operations. It explores environmentally and economically sound design and development techniques in order to design buildings and infrastructure that are sustainable, healthy and affordable, and encourage innovation in buildings and infrastructure systems. It provides guidelines to the designers on the mandatory requirements of green construction within the State of Qatar.



2.2.4 Qatar National Climate Change Action Plan 2030

Developed by the Ministry of Environment and Climate Change and launched in November 2021, Qatar National Climate Change Action Plan 2030 consolidates Qatar's climate change efforts under a single framework, with stakeholder engagement across all sectors. It provides details on how Qatar is adapting itself to the effects of climate change. More than 300 adaptation measures have been identified, with detailed plans for rapid implementation. These include measures to preserve biodiversity, ensure food security, improve healthcare, and increase the resilience of Qatar's infrastructure and economy.



2.2.6 Qatar National Development Framework (QNDF) 2032

Released in 2016 by the Ministry of Municipality, Qatar National Development Framework (QNDF) serves as Qatar's comprehensive national spatial development strategy, providing a roadmap for sustainable growth and development. Aligned with Qatar National Vision 2030, QNDF guides all planning and development activities in the country over the next two decades. A key element of QNDF is its emphasis on implementing green building standards, with a specific focus on meeting the requirements set by the Global Sustainability Assessment System (GSAS) – a green building rating system developed to meet the unique needs of the MENA region.



2.3 Green Buildings & Infrastructure



GSAS is MENA region's first performancebased green building and infrastructure certification system, designed for assessing and rating buildings and infrastructure for their sustainability impacts.

Buildings were responsible for approximately 37% of global CO₂ emissions in 2021, according to the 2022 Global Status Report for Buildings and Construction by the United Nations Environment Programme (UNEP). As the construction sector is responsible for a significant portion of global energy consumption and carbon emissions, adopting green building practices becomes essential for reducing environmental impact of a country. Recognizing the importance of sustainable built environment in meeting its national climate ambitions, Qatar has prioritized green buildings with a special emphasis on the implementation of the Global Sustainability Assessment System (GSAS).

Integrating a project lifecycle approach, GSAS improves the sustainability performance of buildings and infrastructure during design, construction and operation stages with a dedicated certification for each stage. As of January 2023, Qatar recorded 2,000+ GSAS-certified buildings and sites, covering around 2.5 billion square feet of area. The following table represents the exact numbers and areas corresponding to each GSAS certification.



GSAS Certification Type

GSAS Design & Build

GSAS Construction Management

(GSAS-D&B)

(GSAS-CM)

GSAS Operations

(GSAS-OP)

Total

Numbers and areas corresponding to each GSAS certification.

Quantity

89

62

151

Site

Area (ft²)

1,910,757,058

107,616,298

2,018,373.355

Area (ft²)

392,981,588

60,681,404

453.662,992

Buildings

Quantity

1.822

56

1.878

Sustainable Operations & Management



Qatar Foundation HQ Building



Metro Stations









Katara Towers 🚓

National Museum

of Qatar







2.4 Renewable Energy

26 million

Metric tons of CO, expected to be avoided through Al Kharsaah Solar PV project.

Incorporating renewables into Qatar's hydrocarbon-rich energy mix presents an opportunity to optimize energy production, decrease reliance on oil and gas and mitigate greenhouse gas emissions. One of the key projects representing Qatar's drive for energy transition is the Al Kharsaah Solar PV (KSPP) Independent Power Producer (IPP) Project. Al Kharsaah is Qatar's first largescale solar power plant with a capacity of 800 MWp. Located just 80 km west of Doha,

the plant covers a 1000-hectare terrain and integrates 2 million high-efficiency bifacial modules mounted on single-axis trackers. With a capacity to supply 10% of Qatar's peak power consumption, Al Kharsaah is expected to avoid 26 million tons of carbon emissions over its lifetime. Inaugurated in October 2022, the project demonstrates Qatar's dedication to reducing its carbon footprint and increasing renewable power generation capacity.

Through high-efficiency, half-cut bifacial solar modules, Al Kharsaah is equipped with cutting-edge technology to enable substantial power gains and benefit from the region's solar-rich climate. To combat the region's dusty weather, the project will be equipped with semi-automated cleaning system. Al Kharsaah significantly contributes to Qatar's sustainability roadmap and showcases the country's commitment to energy transition towards a more sustainable and renewable future.



qWM 008 Total capacity of Qatar's Al Kharsaah Solar PV project.

In addition to Al Kharsaah, Oatar has recently announced expansion in adaptation of the renewable energy and increasing the energy mix of its grid. To this end, a total of 880 MW will be added to the grid including a power plant in Mesgieed with the capacity of 410 MW and a power plant in Ras Laffan with a capacity of 470 MW.

2.5 Clean Transportation

Qatar is making significant progress in enhancing and advancing its transportation systems in alignment with the sustainability goals outlined in Qatar National Vision 2030. In recent years, the country delivered mega projects aimed at providing ecologically responsible transportation infrastructure. Among significant achievements is the successful completion and operation of Doha Metro project, Hamad International Airport, activation of tram service, and electrification of public buses.

37 Doha Metro stations covering the entire city

2.5.1 Doha Metro

Doha Metro, developed by Qatar Rail, is a new, state-of-the-art automated rail network running mostly underground and across the city of Doha. Launched for public use in early 2020, its objective is to provide an affordable and efficient means of transportation while reducing the carbon footprint associated with private vehicle usage. Providing urban connectivity, the project serves the capital and the suburbs, covering all major locations. Being one of the most comprehensive rail networks in the Gulf region, Doha Metro is fully operational with three lines, Red, Gold and Green, connecting 37 stations. In addition, Doha Metro stations have been designed and constructed with a strong emphasis on environmental sustainability. Many of these stations have received GSAS green building certifications for sustainable design, construction management and operations.

2.5.2 Electric Vehicles



478

Number of electric buses that can be simultaneously charged at Lusail Bus Depot – world's largest electric bus depot.

80+Number of fast electric car charging stations across Qatar.





1000

Number of EV charging stations planned to be installed in Qatar by 2025.

Qatar is making remarkable progress in its electric vehicle (EV) drive. In September 2022, the country successfully transformed 25% of its public bus transportation fleet into eco-friendly mode, marking a significant step towards sustainable transportation.

The next phase of this initiative aims to convert public buses, government school buses and Doha Metro feeder buses into electric-powered vehicles by 2030. Notably, the Lusail Bus Depot has earned a place in the Guinness World Records Book as the largest electric bus depot, boasting an impressive capacity to accommodate 478 buses. Qatar's commitment to expanding its EV infrastructure extends to privately owned vehicles as well, with the installation of more than 80 fast electric car charging stations across the country by Qatar General Electricity and Water Corporation (Kahramaa) with plans to install 1,000 fast charging stations by 2025. These concerted efforts showcase Qatar's dedication to promoting electric mobility and reducing carbon emissions, highlighting the country's position as one the leaders in sustainable transportation.

2.6 Sustainable Events

Alongside UN Agenda 2030, QNV 2030 serves as a cornerstone for organizations' sustainability strategies including those responsible for organizing large-scale events happening in Qatar. In line with the above, Qatar successfully delivered a sustainable FIFA World Cup™ in 2022, setting new benchmarks for social, human, economic and environmental development.



79%

of total waste diverted from landfills during the construction of Qatar 2022 stadiums.



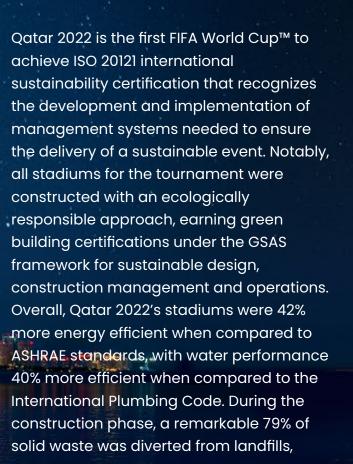
2,000

tons of Qatar 2022's operational waste was recycled or composted.



42%

Energy efficiency percentage of Qatar 2022 stadiums compared to ASHRAE standards.



indicating the implementation of effective waste management practices through recycling and reuse. Post-event, the tournament organizers recycled or composted over 2,000 tons of waste and by the end of 2022, approximately 80% of waste generated in the stadiums had been recycled. Qatar 2022 organizers made significant progress in sustainable transportation by transitioning 25% of public buses to electric buses for use during the tournament.

Building on the lessons learned and the achievements of the FIFA World Cup™, Qatar is now well-positioned to apply and expand its sustainable practices to upcoming events, including Expo 2023 Doha.



Sustainability Progress Report

3.0

Sustainability at Expo 2023 Doha

- 3.1 Sustainability Advisory
- 3.2 AIPH Sustainability Goals

Capacity Building & Engagement

3.3 Sustainability Objectives



The true legacy and success of an event lies not in the spectacle it creates, but its ability to leave the planet unharmed for future generations.

Expo 2023 Doha is deeply committed to meeting and exceeding the sustainability goals outlined by the International Association of Horticultural Producers (AIPH). By aligning with AIPH's recognized five sustainability priority areas, the event aims to contribute to a greener and more sustainable future. From the planning and design phase, Expo 2023 is approaching sustainability through its choice of venue, use of GSAS green building framework for the permanent structures, use of GSAS EcoLeaf for the temporary facilities, and use of existing permanent buildings to support the Expo operations.







In order to fulfill its sustainability commitment, Expo2023 Doha recognized the paramount importance of partnering with top-tier sustainability experts to develop a comprehensive roadmap and facilitate the implementation of measures strategized to achieve the event's climate goals. To this end, the organizing committee of Expo signed an agreement with the Gulf Organisation for Research & Development (GORD) to support the sustainable delivery of the Expo 2023 Doha.

According to the agreement, GORD's scope of work covers various aspects from planning and implementation to operations, dismantlement and postevent legacy. A key part of GORD's role is providing technical support to Expo 2023 teams in implementing GSAS EcoLeaf certification. GSAS EcoLeaf, a new certification introduced by GORD as part of the Global Sustainability Assessment System (GSAS), is designed to significantly enhance the sustainability and

environmental performance of mega events, such as expos and festivals. Since GORD was selected as the sustainability partner of Expo 2023, its team of experts has been monitoring and evaluating the Expo site, guiding the relevant teams on the integration of sustainability best practices. GORD is also conducting regular capacity building workshops to ensure that on-site teams possess the necessary skills for sustainable development of facilities.

Apart from the implementation of GSAS EcoLeaf, GORD is also contributing to the formulation of the Expo's Sustainability Strategy and Legacy Plan, followed by reporting on the sustainability performance of the Expo during preevent and post-event stage.

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3.2 AIPH Sustainability Goals

AIPH has identified five priority areas also known as sustainability goals. The first sustainability priority area identified by AIPH is Climate Action, which focuses on using plants and green spaces to support climate adaptation and resilience programs in urban environments. Biodiversity Conservation is another crucial priority that focuses on promoting nature in cities and sustainable horticultural practices worldwide. Sustainable sourcing and resource management form the third priority area for Expo 2023 Doha in line with AIPH. It focuses on adopting circular economy principles, reducing plastic waste and other forms of pollution, supporting efficient production and ethical supply chain management. The fourth priority area defined by AIPH is Equity and Inclusion that focuses on promoting plant growing and green spaces for all, upholding fair and equitable practices across the horticultural value chain, diversity and human rights. Education and Awareness

Raising constitute the fifth priority area for the Expo 2023, as it aims to engage, inform and inspire people to appreciate the importance of plants and the places where they grow, and to take action to protect and enhance their local environment through plant growing.

Based on the five sustainability priority areas outlined by AIPH, Expo 2023 Doha is adopting a multidimensional approach stemming from the Expo theme "Green Desert, Better Environment" that addresses the unique geographical context of the host country and its regional challenges. The Expo focuses on Desertification Reduction, aiming to promote green life in arid areas. By harnessing the potential of research, development and international partnerships, Expo 2023 Doha seeks to combat desertification and unlock the transformative power of modern technology for horticulture in arid regions.



Expo 2023
Sustainability



Climate Action



Sustainable Sourcing and Resource Management



Equity and Inclusion



Education and Awareness Raising



Biodiversity Conservation

xpo 2023 Doha

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Sustainability Progress Report

Sustainability Objectives

In line with the requirements of AIPH, the preparation and development of Expo 2023 are progressing in a manner that addresses all key objectives applicable at the pre-event stage. To achieve the five overarching goals identified above, Expo 2023 is working towards 12 objectives through the adoption of GSAS Design & Build and GSAS EcoLeaf schemes for the design, construction and operations of the Expo.

The aforementioned GSAS schemes in addition to other policies and guidelines developed for this event help to achieve the objectives related to design phase, contractors & construction, international participants, transport, biodiversity, energy, water, pollution, carbon, sustainable events operations and management, waste & dismantlement, and legacy. Additional sustainability metrics are also considered by the local organizing committee for the Expo to further enhance the outcomes on macro and micro levels.

AIPH's **12 Objectives** to achieve **5 Sustainability Goals**



Expo 2023 Doha materializes the sustainability objectives through an integrated lifecycle approach covering all activities from design and construction to the operations and dismantlement of the Expo. Right from the pre-event stage, comprehensive consideration has been given for the event's impact and sustainability at each of the five aspects:

- Sustainable Hosting Venues
- Sustainable Overlay Works
- シ Sustainable Transport & Mobility
- Sustainable Operations & Management
- Sustainability Capacity Building & Engagement

The following sections detail strategies and tools in place within these five areas to meet the sustainability objectives during the pre-event phase of Expo 2023.



Sustainable Hosting Venues

- 4.1 GSAS Green Building Certification for Permanent Facilities
- 4.2 Sustainability at the Expo House
- 4.3 Sustainability at Al Bidda Park



The spaces we build with compassion for the environment will outlive us through ages, preserving the planet and inspiring generations to come.



The Expo House follows green building principles with GSAS 4 Stars rating.



In terms of venues, the sustainability of Expo 2023 encompasses two key aspects: the sustainability of Al Bidda Park which hosts the pavilions and main activities zones, and the implementation of green building principles in the design and construction of the permanent purpose-built facility, Expo House.

Firstly, Al Bidda Park, the chosen venue for Expo 2023, is designed and constructed to achieve GSAS 3 Stars rating ensuring adequate implementation of eco-friendly features, such as efficient water management systems, energy-efficient solutions and green spaces that promote biodiversity. The park's sustainable infrastructure and features will contribute to reducing the overall environmental impact of Expo 2023.

Secondly, Expo House, the permanent purpose-built facility constructed specifically for Expo 2023, follows green building standards with GSAS 4 Stars rating. The design and construction of Expo House incorporate various sustainable strategies. This includes energy-efficient technologies resulting in 30% reduction in energy consumption. Water conservation measures, such as water-efficient fixtures have resulted in 30% reduction in water consumption. The building is designed to provide a comfortable and healthy indoor environment for its occupants, considering factors such as indoor air quality, natural lighting and thermal comfort.

The following sections start with an introduction of GSAS, and detail the sustainability features of the Expo House as well as Al Bidda Park, addressing all key sustainability objectives outlined by AIPH.

4.1 GSAS Green Building Certification for Permanent Facilities

Sustainability principles for the design and building of Expo 2023's permanent structures i.e. Expo House and Al Bidda Park are guided by the Global Sustainability Assessment System (GSAS) Design & Build certification for building typologies and parks.



4.1.1 About GSAS Green Building Rating System

GSAS is the Middle East's first integrated and performance-oriented sustainability assessment rating system for the construction industry developed by GORD in 2007 in collaboration with the TC Chan Center at the University of Pennsylvania, and the School of Architecture at the Georgia Institute of Technology, USA and other reputed houses of expertise.

GSAS offers various green building certifications with an aim to evaluate the sustainability of the built environment through providing a performance-based approach for assessment, considering the reduction of the environmental impacts of the built environment by adopting the best practices available in the delivery of the project sustainability requirements throughout the entire life cycle of the built environment i.e. from design through

construction to operations. The primary objective of GSAS is to create a sustainable built environment, considering the specific needs and context of the region. This objective includes creating a better living environment, minimizing resource depletion and consumption and reducing environmental degradation due to the rapid pace of urbanization taking place in this era GSAS identifies several sustainability challenges in the built environment. The challenges include air pollution, land use contamination, fossil fuel depletion, water depletion, water pollution, materials depletion, human discomfort and sickness and climate change. These challenges were used to guide the identified framework to ensure robustness in mitigating the adverse environmental impacts of the built environment.









GSAS Green Building System

GSAS identifies several sustainability challenges in the built environment. The challenges include air pollution, land use contamination, fossil fuel depletion, water depletion, water pollution, materials depletion, human discomfort and sickness and climate change. These challenges were used to guide the identified framework to ensure robustness in mitigating the adverse environmental impacts of the built environment.

GSAS framework is comprehensive and designed to follow an integrated life cycle approach to improve the sustainability performance of the built environment. It

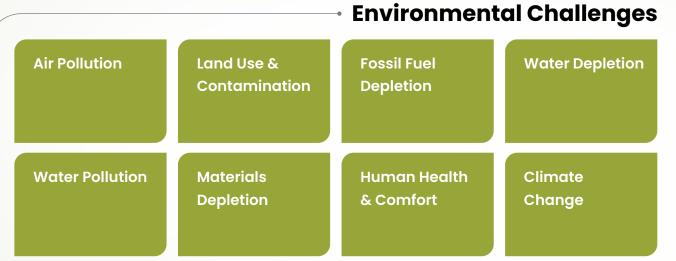
addresses the sustainability impacts during the design, construction and operation stages of buildings and infrastructure projects.

GSAS is administered by **GSAS Trust**, which is a certifying body that recognizes and attests building and infrastructure projects for their environmental excellence in the sustainability milieu. By providing certification services and technical support needed for the implementation of GSAS, sustainability experts at GSAS Trust facilitate projects in curbing their carbon footprint linked with design & build, construction management and building operations.



CONSTRUCTIONS CONSTRUCTIONS CONSTRUCTIONS CONSTRUCTIONS CONSTRUCTIONS





4.1.2 GSAS Framework & AIPH Objectives

GSAS Design and Build (GSAS-D&B) targets all 12 objectives outlined by AIPH to minimize the negative environmental impact of the construction of the permanent facilities and park. Covering all stages of design and construction of the permanent structures, GSAS Design & Build (GSAS-D&B) certification was achieved by Al Bidda and Expo House after these facilities were assessed for their performance against 55 criteria making up 8 key categories. Considering the materiality of some criteria, the certification mandates compliance with 6 key criteria that include thermal energy demand performance, energy use performance, primary energy performance, CO₂ emissions, water demand performance and water reuse performance.



55 SAS-D&B Criteria

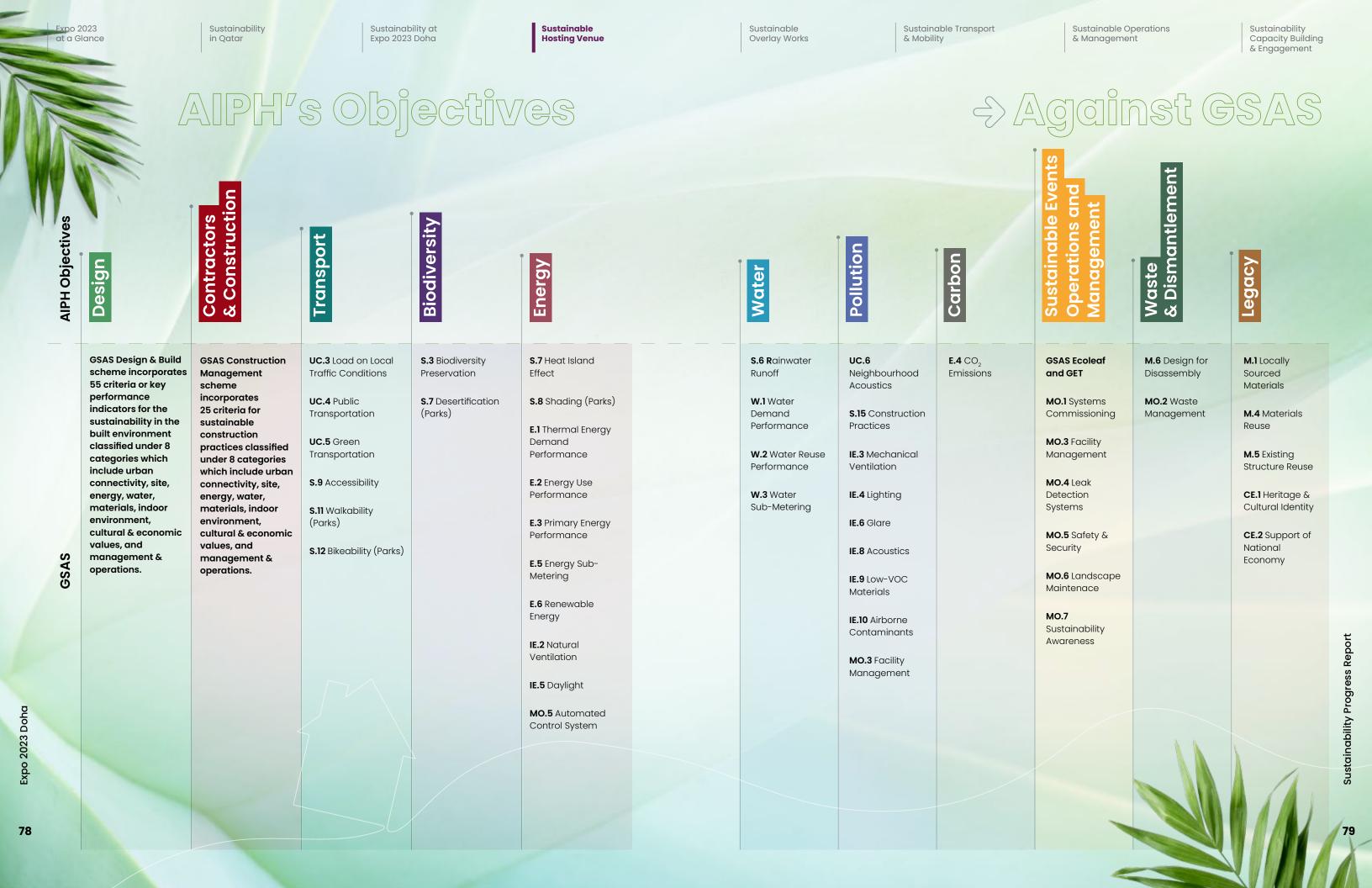


8 main categories covered by GSAS-D&B

- The **Urban Connectivity** category is concerned with the design of the proposed development having a direct impact on adjacent buildings, properties, neighborhoods, and the larger urban community.
- The **Site** category is concerned with the design of the proposed development having a direct impact on both the site of the development itself as well as any adjacent sites.
 - The **Energy** category is concerned with improving the design and energy performance of the development having a direct and positive impact on both the consumption of resources and environmental quality including climate change, fossil fuel depletion, air pollution, and human comfort, health and wellbeing.

- The **Water** category is concerned with water conservation for indoor and outdoor use.
- The **Materials** category is concerned with the conservation of natural resources and the use or reuse of materials and structures to have the least environmental impact.
- The **Indoor Environment** category is concerned with the quality of the indoor environment for the comfort, health, and wellbeing of occupants and users.
- 7 The **Culture & Economic Value** category is concerned with the cultural impacts on the design of the built environment and support of the national economy.
- 8 The Management & Operations category is concerned with the design of the development for use during the operational phase.

Sustainability Progress Report



3.2 Sustainability at the Expo House

Qatar Public Works Authority (Ashghal) and the Ministry of Municipality mandate that the Expo House fulfills the Global Sustainability Assessment System for Design & Build (GSAS D&B) standard certificate requirements. The certification level targeted for the project was GSAS-D&B 4 Stars. In 2021, the project was awarded the Design Certificate. In 2023, it received the GSAS D&B 4 Stars certificate for the mixed development of Expo House and Park, which is the only new development among the four permanent structures planned to support the Expo.

GSAS has guided the design and construction teams on sustainability features and measures implemented at the Expo House. Some key sustainability credentials of the Expo House are outlined in the following sections.



4.2.1 Energy Efficiency

30% Energy efficiency percentage of the Expo House compared to ASHRAE standards.

The Expo House meets rigorous standards of energy efficiency, resulting in 30% more energy efficiency when compared to ASHRAE standards, achieved through the following techniques:

Passive cooling architecture employs green walls and green roofs, resulting in lower heat gain inside the building, lower cooling requirements and reducing the size of the HVAC equipment.



- Installment of efficient thermal curtain wall glass ensures that the heat gain is minimized while daylight is transmitted through to provide sufficient illuminance during the daytime.
- Selection, installation and commissioning of efficient lighting, cooling and ventilation systems. This includes the installation of efficient building services and systems such as low noise air-cooling chillers.







- Building services and systems are integrated with the efficient Building Management Systems for HVAC / Automated Control Systems, such as KNX for the Lighting Control System.
- AHUs are controlled via VAVs and VFDs as per the building load/demand peak demand and non-peak demand as well the FAHUs with Heat Recovery System.
- Chilled water pumps are controlled via VFDs, and there is auto change-over based on a "run hour basis."
- Daylight harvesting sensors are integrated with automated curtain blinds.
- Self-closing and revolving doors are used to ensure that the conditioned air does not leak out of the building while the warm air from outside does not enter the building. This guarantees that the HVAC requirements are met as per the design intent without extra load.

- Motion sensors are used at the backof-house (BOH) spaces ensuring that the lights are switched off when there is no occupancy. This helps in the reduction of energy consumption.
- LED light fixtures are used to lower energy consumption while increasing the life of the fixtures, thus reducing the maintenance cost linked with light fixtures.
- The front-of-house (FOH) areas are provided with dimmers so that during the daytime when natural light can be used for illuminance, the artificial light fixtures usage can be reduced to the minimum.

The elevators and escalators installed in the building are provided with regenerative drives that enable the recovery and reuse of energy that would otherwise be wasted during the operation of elevators and escalators.

Sustainability Progress Report

In line with GSAS standards, the Expo House meets rigorous standards for water conservation. Through the following techniques, the facility is 30% more water efficient when compared to the International Plumbing Code.

- Low-flow fixtures are installed at the Expo House. Taps include a combination of movement sensors, aerators and other flow restrictors, while toilets are with dual flush systems.
- Treated Sewage Effluent (TSE) water is used for landscaping.
- Water metering and leak detection systems are installed to allow facility management teams to manage water use and identify and repair plumbing in need of maintenance.



4.2.3 Waste Management

Within the Expo House, waste receptacles are installed to allow for the separation, storage and removal of a number of waste streams. Space planning is considered for better waste management.

4.2.4 Indoor Environment

The Expo House addresses the sustainability objective of reducing pollution by ensuring clean and healthy indoor environment with the following features:



Good indoor air quality is maintained by selecting low-toxicity materials and controlling ventilation and temperature to balance energy use with comfort.



Auto blind screens linked with daylight sensors are installed for glare control.



Lighting control systems are installed.



Airconditioning cooling with VAVs (Variable Air Volumes) are provided.



The occupants are provided with external views to ensure they are connected with the outside world.

Airconditioned spaces are maintained by keeping air velocities below 0.2m/s at comfort levels.

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3. Sustainability at Al Bidda Park

Sustainable

Overlay Works

Instead of creating a new venue, the organizers of Expo 2023 made a strategic decision to select Al Bidda Park as the hosting location for the Expo. This choice was driven by the park's abundance of diverse flora, making it the perfect setting to showcase a horticultural expo. The park's lush greenery and botanical richness provide a captivating backdrop that will enhance the immersive experience for attendees. With 3 Stars rating under the Global Sustainability Assessment System (GSAS) Design & Build Parks Scheme, Al Bidda Park boasts a range of sustainability features that align with the Expo's commitment to environmental responsibility. The following sections provide highlights of the sustainability features in Al Bidda Park.

4.3.1 Energy Efficiency

Al Bidda Park is designed and built on sustainability principles with special emphasis on energy conservation. The external lighting infrastructure, for instance, incorporates energy-efficient LED streetlights which are known for significant energy savings compared to traditional lighting systems. These LED streetlights are intelligently controlled through the integration of a photocell sensor/timer, which allows the lights to automatically adjust their brightness based on the ambient light conditions.



4.3.2 Water Conservation

95%

of the vegetation in Al Bidda Park comprises native and adaptive plants.

40%

Water efficiency rate of Al Bidda Park compared to International Plumbing Code requirements.

Al Bidda Park is designed and built on sustainability principles with special emphasis on energy conservation. The external lighting infrastructure, for instance, incorporates energy-efficient LED streetlights which are known for significant energy savings compared to traditional lighting systems. These LED streetlights are intelligently controlled through the integration of a photocell sensor/timer, which allows the lights to automatically adjust their brightness based on the ambient light conditions.

Recognizing the importance of preserving and efficiently managing water resources, Al Bidda Park is designed to have 40% lower water consumption than the International Plumbing Code requirements. The park incorporates various water conservation practices including the following:

- Native and adaptive plant species, making up 95% of the vegetation, to reduce the amount of water required for irrigation.
- Smart drip and bubbler irrigation system optimizes water usage by providing precise amounts of water based on plant needs and weather conditions.
- Mulching of soil surfaces conserves soil moisture, improves soil fertility and health, and reduces weed growth, while also improving the visual appeal of the soil.
- Water collected from the site goes through a filtration process before being discharged into the network. Portions of the site that are close to parking areas and roadways are supplied with soakaways and geotextile membranes as approved by the Public Works Authority to prevent direct water runoff and infiltration to the groundwater. The collected water goes through an oil separation process before being connected to the external network.
- Irrigation systems use recycled water to irrigate the external landscape.









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MOST FAVOURED OPTION

Reuse

Using materials repeatedly

→ Recovery

> Landfill

LEAST FAVOURED OPTION

→ Recvele

Lowering the amount of waste produced

Using materials to make new products

Recovering energy from waste

Safe disposal of waste to landfill

→ Reduce,

Within Al Bidda Park, concerned Solid Waste Management (SWM) authorities have taken considerable steps towards initiating sustainable measures. As such, source separation practices based on three streams segregation at the points of Municipal Solid Waste (MSW) generation are deployed.

A three-stream source separation system with separate temporary storage and collection of the following MSW materials is implemented prior to being transported to an approved offsite destination site. The chronological waste hierarchy is deployed at the site.

- ♦ Wet/Organic waste
- Dry Recyclables

 (including paper/cardboard,
 metals, glass, plastic)
- Seneral Waste

4.3.4 Urban Connectivity

Al Bidda Park is situated in proximity to essential infrastructural systems providing electrical, water and telecommunication supply. It has access to the city's main stormwater network, highways, treated sewage effluent water network, public transportation including a number of public bus routes in addition to two metro stations; one of which is primary as it receives crowds from multiple directions. The park allows for more than 30,000 users within its catchment sheds. This connectivity ensures that the park is accessible by users using environment–friendly modes of transport, by walking and biking, and reduces the need for vehicular transport and its adverse environmental impacts.



Number of trees in Al Bidda Park

. I million sqm

Al Bidda Park's area covered with green landscape.

protect the natural reserves and local biodiversity. The park contains almost 1,800 trees, such as the Sidra Tree which is an iconic tree in Qatari culture. At the same time, landscape sustainability best practices were followed to create open spaces suitable to the region, to utilize climate-responsive strategies, and to plant drought-tolerant native species that reduce water consumption.

have been selected to combat desertification, a growing concern across the region. The park contains approximately 750,000 sqm of area covered with grass and 250,000 sqm covered with groundcovers and shrubs. Along with native plants, adaptive species are intelligently employed to ensure biodiversity and richness of landscape while reducing the environmental impacts of non-native, invasive, and water-intolerant plants.

birds. Furthermore, Al Bidda Park is rich in wildlife with many of the plants chosen to encourage wildlife. Due to its geographical location, it attracts many migratory birds. Opened in 2018, Al Bidda has also been recognized as Qatar's very first pet-friendly park.

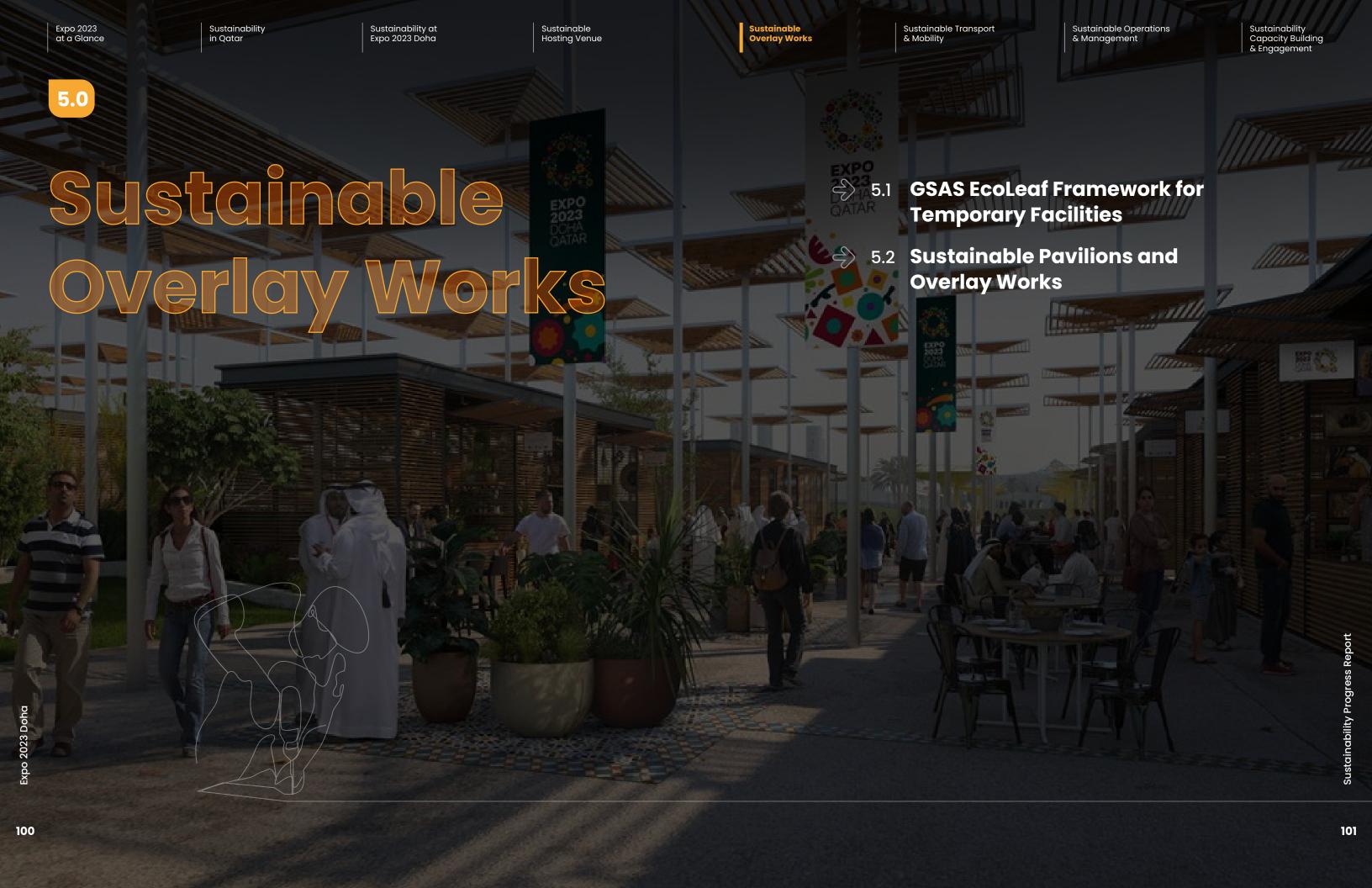


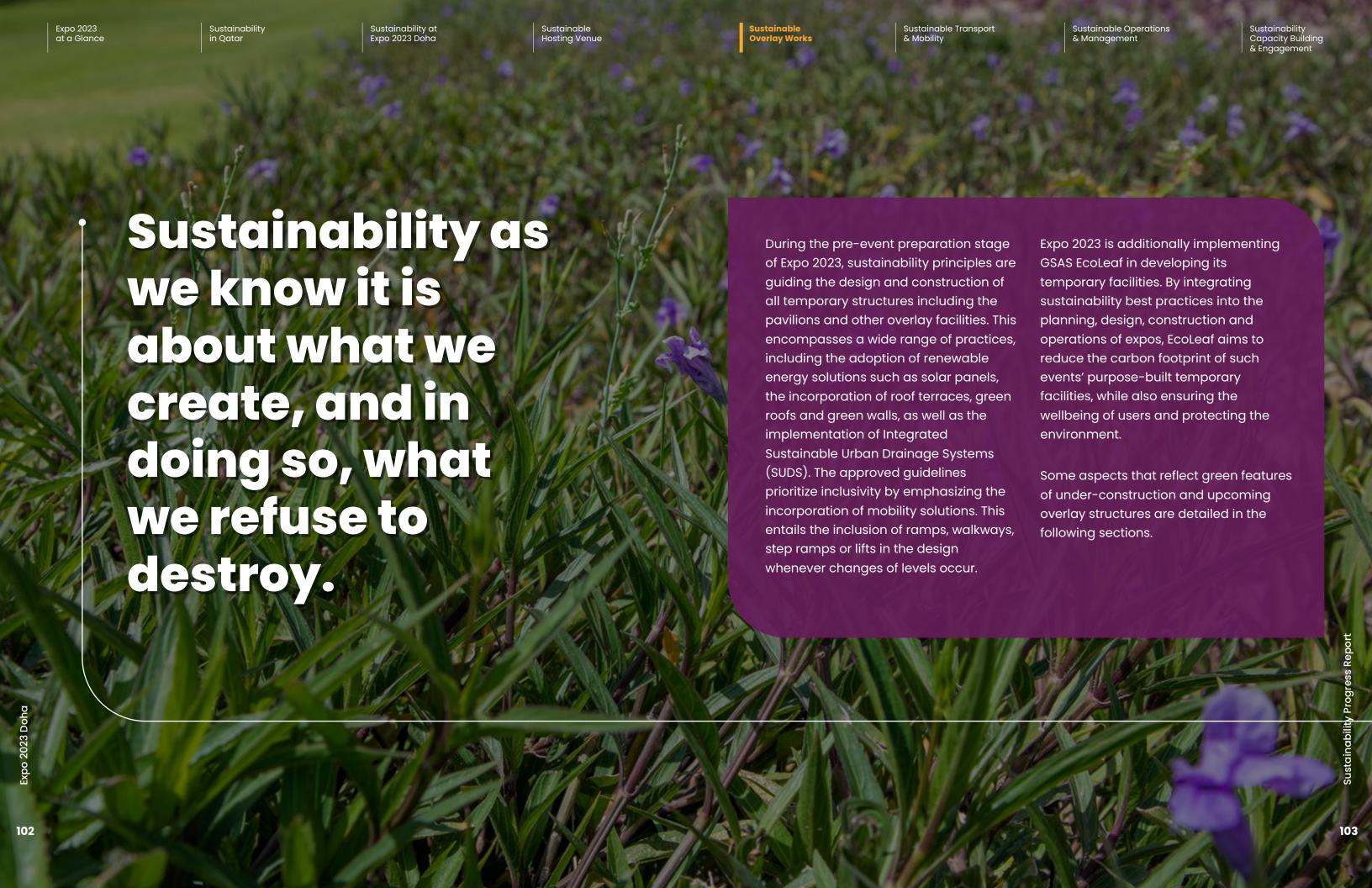


Al Bidda Park has a range of park policies in place that support sustainability and environmental responsibility. These policies aim to minimize the park's ecological footprint, promote conservation, and improve human health and wellbeing.

Sustainability-based Regulations

- \Rightarrow Responsible disposal of waste in the the designated bins
- Prohibiting climbing trees, picking flowers, or damaging plants
- Cyclining is allowed in expressly designated cycle routes only
- Authorized motorbikes, ATVs, Segways, electric scooters are permitted
- ⇒ Designated barbeque grills are available with a permission request
- ⇒ Holding special events and celbearation are possible after seeking permission
- Monitoring of the housekeeping, and tidiness of the park
- Prohibition of cycle, rollerblades or skateboards in lawns, jogging tracks, pitches/courts
- Use of drones is not permitted for safety reasons
- \Rightarrow Glass items and glassware are not allowed for safety reason





GSAS EcoLeaf Framework for Temporary Facilities

The sustainability principles for design and construction of Expo 2023's overlay structures are guided by the GSAS EcoLeaf green certification.



5.1.1 About GSAS EcoLeaf

Covering all stages of event facilities and operation from masterplan and design through to construction, operations and dismantlement, GSAS EcoLeaf covers the following 21 key areas, ensuring that Expo 2023 is committed to sustainable practices and responsible event management.



- **Energy Management:** Emphasizing the efficient use of energy and exploring renewable energy sources to reduce environmental impact.
- 2 Renewable Energy: Promoting the adoption and utilization of renewable energy sources to power event operations.
- Water Management: Implementing measures to conserve and responsibly manage water resources.

- 4 Land & Biodiversity Preservation:

 Protecting and enhancing the natural environment surrounding the event venue to support biodiversity.
- 5 **Waterbody Preservation:** Ensuring responsible management and protection of nearby water bodies.
- 6 Accessibility: Providing equal access and opportunities for all participants, including individuals with disabilities.
- Sustainable Architecture: Incorporating sustainable design and construction practices in event structures.
- 8 Heritage & Cultural Identity: Respecting and promoting local heritage and cultural identity within the event.
- Sustainable Materials: Using environmentally friendly and sustainable materials throughout event operations.
- Materials Eco-Labeling: Encouraging the use of materials with eco-labeling certifications that indicate their environmental impact.
- Supply Chain and Exhibitors
 Management: Promoting sustainable practices among event vendors and exhibitors.
- 12 Waste Management: Implementing strategies to minimize waste generation, maximize recycling, and promote responsible waste disposal.

- **Facility Management:** Efficiently managing event facilities to reduce resource consumption and optimize operations.
- Health & Safety Management: Ensuring the health and safety of event participants and visitors through appropriate management practices.
- Implementing sustainable transportation strategies to minimize carbon emissions and promote efficient commuting options.
- 16 Landscape Maintenance: Responsible management and maintenance of event landscapes and green spaces.
- **Catering:** Promoting sustainable practices in catering services, including responsible sourcing, waste reduction and healthy food options.
- **Pollution:** Minimizing pollution and mitigating environmental impacts associated with event operations.
- 19 **Carbon Footprint:** Monitoring and reducing the carbon emissions generated by event activities.
- Sustainability Awareness: Promoting knowledge and awareness of sustainable practices among event stakeholders and attendees.
- Legacy: Considering the long-term impacts and benefits of the event to leave a positive and lasting sustainability legacy.

4 Key Criteria

Energy Management



Water Management

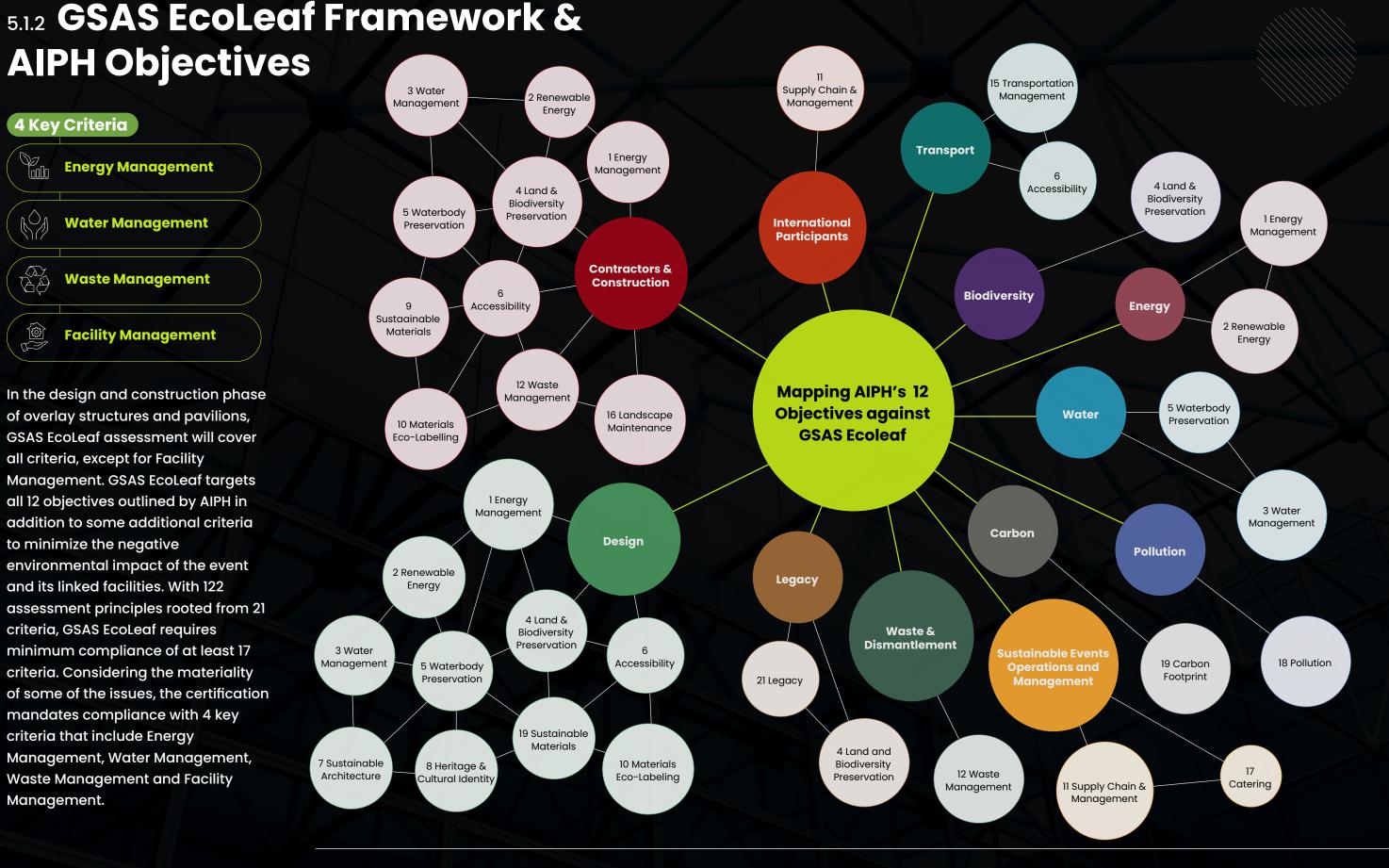


Waste Management



Facility Management

In the design and construction phase of overlay structures and pavilions, GSAS EcoLeaf assessment will cover all criteria, except for Facility Management. GSAS EcoLeaf targets all 12 objectives outlined by AIPH in addition to some additional criteria to minimize the negative environmental impact of the event and its linked facilities. With 122 assessment principles rooted from 21 criteria, GSAS EcoLeaf requires minimum compliance of at least 17 criteria. Considering the materiality of some of the issues, the certification mandates compliance with 4 key criteria that include Energy Management, Water Management, **Waste Management and Facility** Management.



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Sustainability Progress

As per the International Plots Design Principles within the design guidelines approved by Expo 2023 for international participants, all pavilions and overlay structures developed for exhibition purposes are required to integrate sustainable solutions into their design and construction.

5.2.1 Sustainable Pavilions Design

The design principles communicated for international pavilions embody a strong focus on sustainability. These include:



Beauty

Uplifting design while conserving the natural environment.



Equity

Ensuring equal access and treatment for all.



Materials

Promoting responsible material choices and sourcing.



Health

Creating spaces that enhance wellbeing and connection with nature.



Energy

Relying on renewable and green energy alternatives.



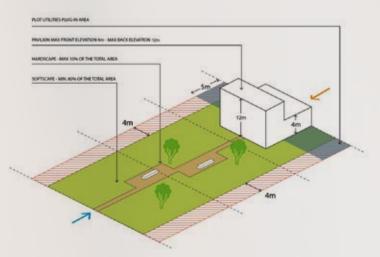
Water

Implementing water-saving measures and promoting water conservation.

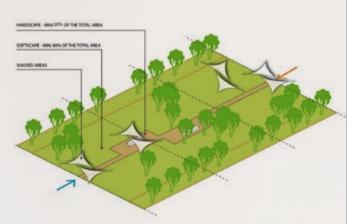


Place

Designing landscapes that support biodiversity and pedestrian-friendly communities.



International participants' plot specifications for landscaping.



Landscape parameters for international participants' plots.



Central to Expo 2023's sustainability vision is the emphasis on designing landscapes that support and enhance biodiversity. As per the guidelines issued by Expo 2023, international participants are required to incorporate open spaces and landscape in their pavilions. One of the key specifications is that the landscaped softscape area should cover a minimum of 80% of the plot area. This emphasizes the significance of incorporating natural elements, such as plants, trees and vegetation, to create a lush and inviting environment.

5.2.2 Construction Waste Management

75%

Targeted recycling rate for construction waste from Expo's overlay works.

As per the Sustainability and Environment Strategy of the Overlay Contractor Rimond-Al Aali for Expo 2023, effective waste management practices are prioritized to minimize the environmental impact of construction activities. The strategy outlines several key measures to ensure responsible waste disposal.

Site waste is handled by licensed waste contractors who follow strict regulations and guidelines. The contractor ensures that all waste is taken to a materials recycling facility, promoting recycling and resource recovery. A recycling rate of at least 75% is targeted for all construction waste leaving the project. It is important to note that this 75% recycling rate includes materials that have undergone 100% recycling, excluding those sent for 'waste-to-energy' processes.

The Overlay Contractor's strategy emphasizes the reduction of landfill usage, with landfills only being used when

absolutely necessary. The aim is to achieve a diversion rate of over 85%, indicating the percentage of waste diverted from landfills through recycling and other sustainable waste management practices.

Overall, Rimond-Al Ali has committed to develop and implement A Construction Environment Management Plan (CEMP) with clear KPIs to optimize environmental performance in areas related resource, waste, noise and dust on site.

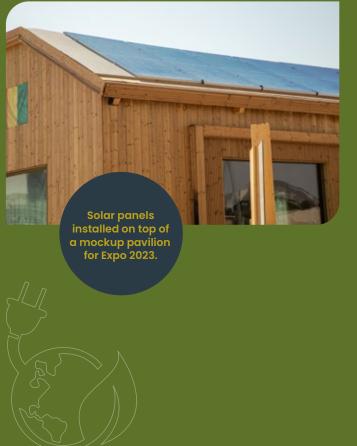


5.2.3 Energy & Water Conservation

Energy and water conservation are among the key objectives of Expo 2023, aligning with its overarching vision of finding "sustainable solution to global water, energy and food scarcity problems." Recognizing the critical importance of energy and water as finite and essential resources from the planning stage, the pre-event phase of Expo 2023 is progressing in a way that addresses water and energy challenges through its various measures during design and construction of pavilions and other overlay structures, in addition to the existing water conservation features of Al Bidda's venue site.

Adoption of renewable energy solutions, such as solar panels, has been prescribed for the international pavilions being developed for the event. Each of the 35+ pavilions being developed by Qatar for the Least Developed Countries (LDCs) at Expo 2023 is being developed to be self-sufficient in terms of energy, without relying on external energy sources. A key component of this self-sufficiency is the incorporation of solar panels on the roofs of the pavilions.

One of the design principles for the development of Expo 2023's temporary structures, like the international pavilions, is centered on water conservation. This principle emphasizes the importance of creating a space that operates in harmony with the water balance of the site and its surroundings. This design principle aligns with the broader sustainability goals of Expo 2023 and underscores the commitment to responsible resource management throughout the event.



through the use of

PFC-certified wood.

5.2.4 Sustainable Building Materials

In the design and construction of overlay structures and pavilions, Expo 2023 is aiming to minimize the use of new materials and prioritize eco-friendly materials. As a crucial first step, the organizers have implemented plans to repurpose and reuse materials and structures used in the FIFA World Cup Qatar 2022™. By repurposing these existing resources, Expo 2023 is effectively minimizing the consumption of new materials, thus conserving valuable resources.

For structures that do require new development, Expo 2023 is committed to using sustainable materials. To this end, Expo 2023 has constructed a model house that embodies the approved plan for 35+ LDC pavilions. This model house utilizes PFC (Programme for the Endorsement of Forest Certification) certified wood, resulting in a significant 70% reduction in CO₂ emissions compared to conventional construction materials.







Every journey we takeleavesan irreversible mark, reminding us that the impact of our transport choices stays far beyond our own footsteps.

In the preparation phase of Expo 2023, a strong focus has been placed on sustainable transport and mobility to ensure an environmentally friendly and efficient transportation system for participants and visitors. This involves implementing various measures to minimize the event's carbon footprint and promote sustainable transportation options while also enhancing the accessibility of the event.

Firstly, the event's strategic location will encourage the convenient use of mass transportation options. Attendees will have easy access to reliable and efficient public transportation services. This will not only reduce traffic congestion but also minimize the overall carbon emissions associated with commuting to and from the event.

Secondly, Expo 2023 will prioritize active transportation by providing accessible pedestrian and bike pathways, allowing attendees to choose walking or cycling as sustainable modes of transportation with zero carbon footprint. By establishing safe and well-connected routes, the event will also encourage participants and visitors to embrace active lifestyles while reducing their reliance on motorized transport.

In addition to promoting sustainable transport, all attractions and facilities within the event site are designed and being constructed to ensure accessibility for people of all abilities. This aligns with the broader sustainability objectives of Expo 2023 as well as AIPH. Some aspects that reflect measures and progress that will enable sustainable transport and mobility to and within the Expo 2023 are detailed below.

Expo 2023 venue, Al Bidda Park, offers a variety of existing pedestrian, cycle and vehicular accessible paths. There are also existing jogging paths and a horse track. The access and internal mobility strategy during the Expo aims to use the existing park network including the main paths and the central spine for the direct North/South connection through all three thematic zones of Expo.

To further enhance the mobility and accessibility within the Expo premises, the following provisions have been made during the preparation phase:





Electric Bikes and Scooters: In Al Bidda Park, authorized motorbikes, ATVs, Segways, electric scooters and other mechanically propelled transport are permitted. Individual electric scooters can also be considered supplementary vehicles for differently-abled visitors.

Jogging/Walking Track: Al Bidda's Jogging track is a 10.5 km (15,000-step) route with an elevation gain of about 33 m. The development of Expo's facilities is progressing in a way that allows access of the park's jogging track to the main attractions of Expo 2023.



Cycling Lane: Al Bidda Park offers approximately 6 km of smooth, stress-free riding track surrounded by natural beauty. To encourage ecofriendly modes of transportation while also enhancing accessibility, the cycling tracks will remain accessible for visitors throughout the event.



Electric Golf Carts: Expo 2023 has incorporated the use of ecofriendly golf carts during its development stage, adding an extra layer of convenience. The use of electric golf cart services will enable visitors, particularly those with limited mobility and families, to easily navigate the expansive grounds and reach their desired attractions. By prioritizing the needs of individuals with limited mobility and families, Expo 2023 is aiming to create an inclusive and accessible environment, providing equal opportunity for all.

348benches/seats
across Al Bidda Park.



Park Accessibility: The park has step-free access and the majority of the park paths are easily accessible by wheelchair users. Any steps in the park are supplemented by accessible ramps. The play areas in the park have been designed with equipment that can be used by children with limited mobility and those with learning difficulties. All walkways at intersections are designed and reviewed against the ADA standards for compliance purposes. Important elements of access and design include effective wayfinding systems, use of landmarks, signage, distance to destination markers and points of interest to assist in navigating the available routes easily. The park has multiple pedestrian access points along its perimeter to avoid longer walking distances, which could be caused by limiting the number of entrances. The park has no fencing or obstruction around its boundary.



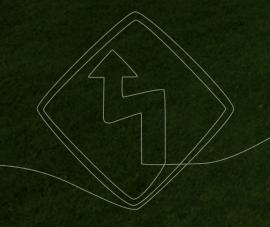
Pavilion Accessibility: Pavilions being developed for the Expo are required to provide an accessible transition between internal and external exhibition spaces with no steps. Additionally, pavilions that include rooftop terraces as part of their exhibition are required to prioritize accessibility for individuals with disabilities.

Electric Train: During the Expo 2023, small electric carts/trains stops are planned to be provided at key points of the park, near the existing facilities and kiosks. This eco-friendly mode of transportation will provide a seamless and efficient way for visitors to access and navigate the Expo, ensuring easy access to various attractions.

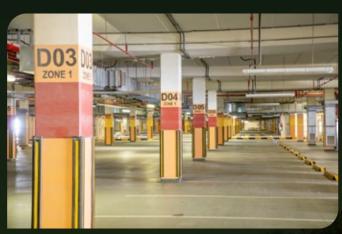


6.2 Sustainable Connectivity & Access to Expo 2023

Mobility to reach Expo 2023 is a critical aspect that ensures the accessibility and inclusivity of the event for all attendees. Accessibility through public transport, including buses, metros and taxis, plays a vital role in ensuring that individuals of all abilities can reach the event venue conveniently and independently. Expo 2023's development is progressing to ensure that the event remains conveniently accessible to all via a range of commute options. Following are some measures that will streamline the mobility to Expo 2023.







Accessible Car Parks: Al Bidda accommodates approximately 4,424 car parking spaces, which have been given direct connections to one of the access points of Expo 2023. As a result, the visitors will be led through the car park to the closer entrance. Once checked, the visitors can freely move in the park. Al Bidda Park's underground car parking spaces are designed and built with sustainable techniques to mitigate the negative impacts of the heat island effect and rainwater runoff. With three parking zones, Al Bidda is accessible from multiple sides.

Arumailah Zone provide access through Al Corniche North & Al Corniche South
(Al Corniche Street); Al Bidda Zone is connected to Al Bidda West (Al Rayyan Road) & Al Bidda South (Al Aqsa Street, Corniche), and Wadi Al Sail Zone is accessible through Wadi al Sail North & Wadi Al Sail South (Al Istiqlal Street).

82 %

Number of wheelchair friendly car parks at Al Bidda Park.

4,424 \Rightarrow Number of car parks at Al Bidda Park.

3

Number of bus stations connected to Al Bidda Park.

2 ->

Number of metro stations connected to Al Bidda Park.

Expo 2023 Doha



Doha Metro: Building on the experience of FIFA World Cup Qatar 2022™, Expo 2023 organizers anticipate that Doha Metro will be extensively used by visitors, as the event location is a short distance from two metro stations: Al Corniche Metro Station (0.8 km) and Al Bidda Metro Station (1.8 km), located on the Red Line.

The Red Line runs for 40 kilometers from Al Wakra in the south to Lusail in the north, passing through Al Bidda Park where Expo 2023 is located. This line connects Hamad International Airport at Terminal 1 to the center of the city. It has 18 active stations, with two interchange stations for the metro lines – Al Bidda for interchanges between Red and Green, and Msheireb for interchanges between all three existing metro lines. The Red Line also provides interchange stations between the metro and tram with Legtaifiya and Lusail QNB. As evidenced during FIFA World Cup Qatar 2022™, Doha Metro provides event organizers with a significant opportunity to avoid congestion, GHG emissions, noise and air pollution associated with road transportation.

While Doha Metro presents a clean alternative to private vehicle, the project has also incorporated sustainability in every aspect of the stations' design, from the materials used in their construction, energy and water-efficient features, and the layout of the precinct as a whole. With GSAS green building certifications, various technologies have been applied for resource-efficient and energy-saving construction of the metro stations across Qatar.





Bus Service: The Expo organizers have ensured that visitors can conveniently reach the venue by utilizing the extensive bus network that connects to various metro stations and other prominent landmarks in the area. The proximity of Al Bidda Park to bus stations provides a convenient and sustainable transportation option for attendees. Al Bidda Park currently has three bus stops connected to it with another three planned to be developed in the future.

Public Taxis: Attendees of Expo 2023 can rely on public taxis to travel to and from Al Bidda Park, enjoying the flexibility and convenience of this transportation mode. Visitors can easily hail taxis from designated taxi stands or find them circulating near the Expo venue.

10 km Approximate total length of pedestrian and bicycle pathways in Al Bidda Park.



Pedestrian & Bike Access: Al Bidda Park is supplied with two sets of fully dedicated pathways for pedestrians and cyclists, with an approximate total length of 10 km. The park is interconnected with footpath networks within the wider neighborhood, providing choices of walking and/or cycling routes that lead to the park.

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7.0

Sustainable Operations & Management

- 7.1 Sustainability Audits
- 7.2 Sustainability & EnvironmentStrategy for Overlay Works
- 7.3 Sustainable Sourcing Code
- > 7.4 Sustainable Event Operations
- 7.5 Sustainable Management Practices
- 7.6 Quality, Health, Safety & Environment
- 7.7 Logistics Management

The decisions we make for our planet today will ripple through time to nurture climateconscious communities tomorrow.

Expo 2023 has taken a comprehensive and multifocal approach to address its sustainability objective of reducing pollution in operations and management. In the pre-event stage, the organizers have established a robust mechanism to minimize environmental impacts. To ensure responsible and ethical practices across all areas of Expo 2023, business partners have been provided with the Expo 2023 Sustainable Sourcing Code. This code outlines specific requirements that partners must adhere to, aligning with the UN Sustainable Development Goals and internationally recognized human rights standards. Partners engaging in Expo 2023 are required to submit Sustainability Commitment Statement,

agreeing to comply with the sustainability code and get monitored and evaluated on their sustainability performance. Supplementing the Sustainability Sourcing Code is a range of guidelines that have been issued by Expo organizers to ensure that the event preparation progresses in a manner that prioritizes sustainability from pre-event to post-event phase. This includes implementation of waste management plan promoting recycling and composting practices and guidelines for packaging materials and single-use products. Some aspects that reflect sustainable operations and management of expo are detailed in this section.

3.1 Sustainability Audits



Expo 2023 has undergone comprehensive pre-assessment site tours which along with upcoming sustainability audits, will encompass the entirety of the Expo 2023 venue, ensuring a comprehensive evaluation of sustainability practices.

As part of the comprehensive preparation for hosting Expo, all facilities involved are undergoing sustainability audits. These audits are conducted by experts from GORD, who assess the performance of ongoing works in terms of their environmental, social and economic impacts. The scope of these audits encompasses the entire Expo site, including the Expo House, as well as permanent and temporary facilities located within Al Bidda Park. The primary objective of these audits is to evaluate the performance of the facilities. Additionally, they play a vital role in providing guidance to the teams by sharing insights on sustainability best practices.







One of the sustainability pre-assessment reports issued by GORD.

7.2 Sustainability & Environment Strategy for Overlay Works

As part of its commitment to meet the sustainability requirements of Expo for overlay works, Rimond-Al Aali is working towards the implementation of Sustainability and Environment Strategy. The Contractor has obtained ISO 14001 certification from an accredited body for their environmental management system. This certification establishes a comprehensive framework that outlines the precise implementation of environmental management practices across our organization.

Key aspects covered in Rimond-Al Aali's Environment Management System include the following:

- Construction Environmental Management Plan
- Environmental Risk Assessment
- Sustainable Materials
- Material recycling and reuse and waste minimization
- EMS Monitoring & Reporting



3.3 Sustainable Sourcing Code

Under the Sustainable
Sourcing Code, business
partners of Expo 2023 are
obligated to contribute to
the achievement of the UN
Sustainable Development
Goals. This entails taking
measurable actions that
cover social, environmental,
economic, human and
governance aspects,
promoting sustainable
development in their
operations and supply
chains.

Respecting internationally recognized human rights is another crucial aspect of the code. Partners are expected to uphold the principles outlined in the UN Guiding Principles on Business and Human Rights, which include respecting human rights as enshrined in the United Nations Universal Declaration of Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. This ensures that partners prioritize fair treatment, non-discrimination, and decent working conditions throughout their business activities.

Furthermore, the code emphasizes the importance of complying with internationally recognized standards of best practice in sustainability applicable to the partners' respective industries. This requirement encourages these organizations to adopt responsible environmental practices, promote resource efficiency, reduce carbon emissions, and implement sustainable management systems.

Following are the priority issues covered in the Sustainable Sourcing Code of Expo 2023 Doha:

- Human Pillar covering workers' living and working conditions and recruitment.
- Social Pillar guiding no discrimination against customers or community members based on race, skin color, ethnic, national or social origin, gender, disability, language, religion, opinion, wealth, birth or any other status.
- Economic Pillar prioritizing local and regional value chain and business development.
- Environmental Pillar covering GHG mitigation, waste minimization and water saving and biodiversity conservation, etc.
- Governance Pillar covering aspects related to performance management, human rights due diligence and access to remedy, compliance, anti-bribery and anti-corruption, supply chain management, and industry specific standards and regulations.

7.4 Sustainable Event Operations

Expo 2023 has gone an extra mile by implementing the GSAS Ecoleaf certification for its operational activities. While EcoLeaf enables and evaluates sustainability across all aspects of the event from planning and design stage, in the operations phase it covers the following 11 criteria:

Energy











Water Management

Sustainability **Awareness**

Waste Management



Management











Pollution

Health & Safety

Supply Change & Exhibitors Management







Landscape **Maintenance**



Catering

During the pre-event stage, Expo 2023 has taken significant measures to mitigate pollution caused by products and services during the event. For instance, the organizers have issued Packaging Material Guidelines that strictly regulate catering operations. The guidelines emphasize the elimination of disposable packaging to the maximum extent possible. In cases where disposable packaging is unavoidable, all single-use service ware used during Expo 2023 catering operations must be industrially compostable,

meeting international standards such as

EN13432 (EU), ASTM 6400 (US), AS 4736 (Australia), or the home compostable certification. Caterers are required to provide a certificate of compostability for every item to verify its compostability.

For plastic products, in addition to compostability, Expo 2023 requires caterers to use products that are PLA 7 compliant. This certification ensures that the plastic is made from PLA resin, derived from renewable resources like cornstarch or sugarcane, and meets specific criteria for biodegradability, compostability and environmental sustainability. It is important to note that the use of traditional plastics is strictly prohibited within Expo 2023 premises. While the Expo has provided an approved list of suppliers, it is the responsibility of the caterers to verify the certificate of compostability for each item, including plates, bowls, cups, glasses, cutlery, cutlery sachets, boxes, sauce containers and any ancillary parts.

Material guidelines for bioplastics





















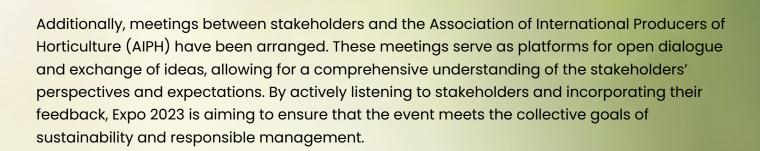
7.5 Sustainable Management Practices



At the management level, proactive measures have been taken to encourage the staff to go paperless by reducing the use of printed materials and opting for digital copies whenever possible. Plastic usage is also being minimized in office spaces, highlighting the commitment to reducing single-use plastic.

At the Expo level, significant efforts are being made to reduce paper consumption. One notable step in this direction is the decision not to print tickets, instead utilizing the Haya app and website for bookings. This transition to digital platforms will not only eliminate the need for paper tickets but also enhance convenience and accessibility for attendees.

The Expo 2023 management has taken a proactive approach in engaging with various stakeholders. To facilitate this engagement, Expo 2023 organizers have organized site visits, providing an opportunity for stakeholders to gain a firsthand understanding of the preparations and construction processes. These site visits allow stakeholders to witness the progress being made, ask questions and provide valuable input.











Quality, Health, Safety and Environment (QHSE) management plays a crucial role in ensuring the sustainability of an event. By implementing effective QHSE practices, event organizers can safeguard the wellbeing of workers and participants. Expo 2023 Doha has placed people at the center of its sustainability strategy.

To achieve this, Expo 2023's Overlay
Contractor Rimond-Al Aali is following
Quality, Health, Safety, Security and
Environmental Management on works at the
event's site. A key part of this plan involves
Health & Safety Risk Management and Health
& Safety Strategy which emphasizes the
importance of addressing and mitigating
potential H&S emergencies. It involves a
comprehensive understanding of potential
risks, meticulous planning and organizing of
control strategies to minimize or eliminate
these risks, and ensuring the effectiveness of
implemented control measures.

Accordingly, these documents guide the action plans to respond to emergencies, ensuring immediate response and effective communication with all stakeholders. Regular testing, review and modification of the action plans are conducted to maintain their effectiveness. To ensure thorough evaluation and alignment of HSE measures before work begins, the Overlay Contractor of Expo 2023 requires all organizations involved in project activities to submit their Risk Assessment Method Statements (RAMS) for review, comment and acceptance before commencing work. RAMS are required to be submitted at least 14 days prior to the agreed start date, allowing for a minimum seven-day review period while more complex operations necessitate a longer review process, overseen by package managers, design managers and the H&S team.

Following are the keys areas covered in the Quality, Health, Safety, Security and Environmental Management approach being implemented on Expo site by the Overlay Contractor:

- Continuous Improvement Approach
- Health & Safety Risk Management
- Competence of Human Resources
- Health and Safety Strategy
- Safety in Design of Facilities
- Risk Assessment Methods
 Statements
- Risk Identification and Mitigation in a Virtual Environment
- Audits and Surveillance Process







Emergency Contact No, In Case of Fire Contact No : • Police, Fire and Ambulance •

999

7.7 Logistics Management

Efficient logistics of an event is intricately linked with environmental sustainability because it focuses on optimizing the use of resources, reducing waste, and minimizing negative environmental impacts throughout the supply chain and operational processes. By carefully managing transportation, storage, and distribution activities, logistics can contribute significant environmental benefits.

Recognizing this significance, Expo 2023's Overlay Contractor has implemented a Preliminary Logistics Plan. Rimond-Al Aali's logistics package for Expo 2023 covers essential aspects such as implementing effective traffic and construction management plans, ensuring safe access for pedestrians and vehicles, managing transportation and loading/offloading activities, maintaining public safety around the project's perimeter, and coordinating the use of Al Bidda Park with construction site activities, all of which contribute to the overall environmental sustainability objectives targeted by Expo 2023.

Following are the key areas thoroughly covered in the **Preliminary Logistics Plan** being implemented on Expo site by the Overlay Contractor:

- Logistics Management
- Site Accommodation & Access Points
- Site Security Provisions
- Temporary Services Energy
 Management System
- Tracking And Delivery Management
- Temporary Power, Water & Sewage
 Connections
- Waste Management



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8.0

Sustainability

Capacity Building & Engagement



- ♦ 8.1 Capacity Building Programs
- ⇒ 8.2 Participations & Collaborations
- 8.3 Tree Planting Initiative
- **Solution** 8.4 Community Awareness Campaigns



By spreading awareness and knowledge around climate realities, we can transform apathy into action, indifference into inspiration and ignorance into enlightenment.

The importance of events' sustainability awareness and marketing activity cannot be overstated when it comes to community engagement and widening the positive environmental impact of an event. Even before their onset, events can inspire individuals and organizations to adopt eco-friendly behaviors and contribute to a greener future.

Expo 2023 Doha has engaged with the public and organizations at local, regional and global levels in creating awareness about ecofriendly practices. Leveraging various tools and means, including social media platforms, interactive events, awareness drives, news coverage and publications, the Expo has successfully reached a wide audience. This section details the tools that Expo 2023 used to create sustainability awareness.

Capacity Building Programs

To ensure that the sustainability strategy is implemented at every level, Expo 2023 organizers joined forces with the Gulf Organisation for Research and Development (GORD) to facilitate capacity building workshops for the employees stationed at the Expo site.

These workshops served as a platform to provide comprehensive training on sustainability best practices. One significant aspect of these trainings was introducing the employees to GSAS EcoLeaf and equipping them with the knowledge and tools to implement this green certification. The workshops focused on educating engineers and other professionals on practical methods to implement sustainability best practices throughout the event site, with the overarching goal of minimizing its carbon footprint at every stage.





8.2 Participations & Collaborations

35+

Number of events joined by Expo 2023 organizers.

Recognizing the importance of engaging diverse audiences and leveraging existing platforms, Expo 2023 has forged partnerships with like-minded organizations, government bodies and other event organizers to amplify the message of "Green Desert, Better Environment" resulting in participation in 36 events organized locally, regionally and globally.

At the national level, the organizers collaborated with environmental organizations, industry associations and government agencies involved in sustainability initiatives. By participating in conferences, workshops and seminars focused on sustainability, the Expo organizers showcased their commitment to fostering a greener future and raised awareness about Expo 2023's sustainability-themed offerings.



Regionally and internationally, the Expo team actively participated in sustainabilityfocused events and forums that brought together stakeholders from various countries. By attending and presenting at these events, they enhanced the Expo's visibility on the global stage and connected with influential leaders, experts and organizations in the field of sustainability. The Expo's participation in international events allowed the organizers to highlight the significance of the event in addressing global environmental challenges and fostered partnerships with stakeholders from around the world. An outcome of these efforts is reflected in confirmed participation from more than 50 countries.

8.2.1 27th Conference of the Parties to the UNFCCC (COP27)

Expo 2023 team joined the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27) that took place from 6 to 18 November 2022 in Sharm El Sheikh, Egypt. The United Nations (UN) Conference of Parties (COP) events are annual international gatherings where representatives from various countries come together to discuss and negotiate global climate change policies and actions.







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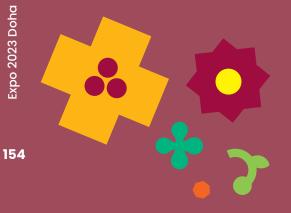
8.2.2 2nd Waste Management Conference and Exhibition 2022







The 2nd Waste Management Conference & Exhibition – Doha 2022, held in June aimed at developing the waste management system, raising awareness, highlighting the latest methods in waste management and the production of energy, fertilizer and recyclable materials, supporting the idea of community engagement to preserve the environment, and encouraging investment in this area.



8.2.3 3rd Recycling Towards Sustainability Conference & Exhibition 2023





The Ministry of Municipality organized the third edition of the Recycling Towards Sustainability Conference & Exhibition, from May 9 to 10, 2023. The event centered around the theme of 'Together we make the difference. For a sustainable future,' and brought together a diverse array of participants including Expo 2023 organizers. Attendees included governmental and semi-governmental institutions, representatives from the private sector, local factories, external parties, as well as a group of local and international experts and specialists in the field of waste management and treatment. At the conference, Expo 2023 announced its sustainability strategy.



8.2.4 FIFA World Cup Qatar 2022TM







During the FIFA World Cup Qatar 2022, Expo 2023 made its presence felt at the FIFA Fan Festival by hosting families and fans at its expansive pavilion. The pavilion offered a wide array of engagement activities specifically designed to raise awareness about sustainability. The primary objective was to leverage the daily footfall and diverse visitor segments to drive awareness about Expo 2023 Doha and to introduce visitors to the theme of sustainability in horticulture and agriculture.

Through interactive displays, educational exhibits and engaging experiences, Expo 2023 aimed to captivate the attention and interest of the fans attending the FIFA Fan Festival. The pavilion served as a platform to showcase the importance of sustainable practices in the fields of horticulture and agriculture.







8.2.5 Qatar Sport Day



Expo 2023 is fully engaged in national annual events, such as Qatar Sport Day. As part of this day-long event held every year, Expo 2023 organized a variety of outdoor activities, emphasizing the significance of healthy living in alignment with the human pillar/of its sustainability strategy.



8.2.6 Qatar International Agricultural Fair (AgriteQ)

During the 10th edition of the Qatar International Agricultural Fair (AgriteQ), which took place from March 15 to 19 2023, Expo 2023 Doha launched its campaign titled Which side are you on.' As part of the campaign, visitors were invited to envision and choose between two versions of our planet's future: one that is desertified or one that is green.



8.2.7 Doha International Book Fair

Expo 2023 Doha actively participated in the Doha International Book Fair to promote awareness about the Expo and sustainable horticulture. In addition to its main pavilion, the Expo organized engaging activities for children in the dedicated children's area. During these activities, children were actively involved in planting and gardening initiatives. At the book fair, Expo 2023 also arranged a seminar titled "Expo 2023 Doha vision in combating desertification."









8.2.8 Other Participations

In addition to the abovementioned events, Expo 2023 actively participated in a multitude of regional, local, and international events, showcasing its commitment to global engagement and collaboration. Notable among these were the prestigious Amir Cup, OTM London and ATM Dubai.



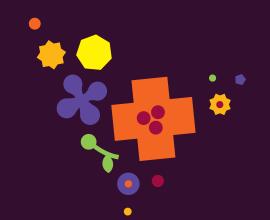






Tree Planting Initiative

Expo 2023 has actively participated in community awareness drives, engaging with local residents, organizations and stakeholders to promote ecofriendly practices and raise awareness about the importance of sustainability. To this end, Expo 2023's senior leadership actively joined in the Plant Million Trees Initiative, gathering leading organizations to enhance plant diversity by planting native trees in Qatar. This initiative aimed to increase green areas, trees and picturesque landscapes. Additionally, it contributed to climate improvement and pollution control by lowering temperatures and reducing CO₂ emissions.









8.4 Community Awareness Campaigns

In the pre-event stage, Expo 2023 has employed various social media campaigns as effective tools to create sustainability awareness and engage a wider audience. By leveraging the power and reach of social media platforms, Expo 2023 has been able to disseminate information, share updates and raise awareness about sustainability-related topics in innovative ways. Through these campaigns, Expo 2023 has been able to earn more than followers on its social media spaces including Facebook, Twitter, Instagram, Youtube and TikTok with more than 75,600 followers.













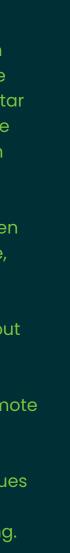




8.4.1 Sustainable Ramadan Campaign

Tipsfora

During the period leading up to and throughout Ramadan 2022, Expo 2023 launched a social media campaign called "Sustainable Ramadan." The primary objectives of this campaign were twofold. Firstly, it aimed to raise awareness among the people in Qatar about the significance of responsible production. Secondly, the campaign focused on sensitizing and creating awareness about organic waste composting. Ramadan is a time when food consumption tends to increase, resulting in a higher amount of food waste. Expo 2023 used social media platforms to educate the public about the benefits of composting organic waste as a means to reduce landfill waste, conserve resources and promote circular economy practices. The campaign provided practical tips, information on composting techniques and highlighted the positive environmental impact of composting.







wasted globally each year.

lips for a

one third of all food produced for human consumption!



What is

Sustainable

Ramadan

















8.4.2 Conscious Living Campaign

The "Conscious Living" campaign, launched during Ramadan 2023, was a content-driven initiative that aimed to inspire individuals to make positive changes in their daily habits, with a focus on supporting local farms, connecting with nature, practicing mindful fasting and adopting zero-waste iftars. Through engaging social media content, the campaign encouraged people to embrace conscious living practices, such as choosing locally produced goods, spending time outdoors, being mindful of their food choices and reducing waste during iftar gatherings. By promoting these values, the campaign aimed to create awareness and empower individuals to make a meaningful impact on the environment and the community.



In the end, the memories we create from our events must not be scarred by the neglect for our planet. 168



