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# SUSTAINABLE URBAN TOURISM DEVELOPMENT IN DOHA: BALANCING ECONOMIC GROWTH AND ENVIRONMENTAL STEWARDSHIP

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**ABSTRACT:** *This study investigates the development of sustainable urban tourism in Doha, Qatar, with a focus on balancing economic growth and environmental stewardship. The research explores the integration of sustainable practices within Doha's tourism sector, the implementation of key policies such as the Qatar National Vision 2030, and the impact of the FIFA World Cup 2022 on tourism and sustainability efforts. Using a mixed-methods approach, including qualitative interviews with 30 key stakeholders and quantitative data analysis, the findings reveal that while Doha has made substantial progress in areas such as resource management and green infrastructure development, challenges remain—particularly in retrofitting older buildings and enforcing sustainability standards. The FIFA World Cup 2022 acted as a catalyst for sustainable practices, but the long-term success of these efforts depends on continued investment and policy enforcement. This study provides valuable insights for policymakers, urban planners, and tourism officials working to promote sustainable urban tourism in rapidly developing cities.*

**KEYWORDS:** Sustainable urban tourism**,** Economic growth**,** Environmental sustainability**,** Smart city technologies**,** Stakeholder engagement**,** Tourism planning and development.



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## INTRODUCTION

Urban tourism is increasingly recognised as a key driver of economic development, especially in rapidly growing cities like Doha, Qatar. As Qatar seeks to diversify its economy away from oil and gas, tourism has emerged as a central pillar of its growth strategy. However, with the expansion of urban tourism comes the responsibility of balancing economic gains with environmental sustainability, particularly in regions with limited natural resources and unique environmental challenges, such as Qatar. Sustainable tourism practices are therefore critical to ensuring that the benefits of tourism development do not come at the expense of the environment or the well-being of local communities.

This study aims to examine how sustainable tourism practices have been integrated into Doha's broader development strategy, focusing on the role of Qatar National Vision 2030 (QNV 2030), a national policy framework that emphasises economic diversification, social development, and environmental protection. Additionally, the research explores how the FIFA World Cup 2022, as a major global event, accelerated the adoption of sustainable practices in tourism infrastructure and urban development.

To achieve this, the study addresses several key research questions related to the planning, development, and sustainability of tourism in Doha:

1. Tourism Planning and Development:
   - How has Doha integrated sustainable practices into its urban tourism planning and development strategies?
   - What are the key policies and standards implemented to ensure sustainable tourism growth in Doha?
2. Economic and Environmental Balance:
   - What are the economic impacts of tourism on Doha's urban areas, and how are these balanced with environmental sustainability efforts?
   - How do smart city technologies contribute to sustainable tourism and environmental conservation in Doha?
3. Stakeholder Involvement:
   - What roles do citizens and stakeholders play in the sustainable tourism development of Doha?
   - How effective are the mechanisms for stakeholder engagement in tourism planning and implementation?
4. Challenges and Best Practices:
   - What are the primary challenges faced in promoting sustainable urban tourism in Doha?
   - What best practices can be identified from Doha's experience that can be applied to other cities aiming for sustainable tourism development?


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By answering these questions, the study aims to provide a comprehensive analysis of Doha's current tourism strategies, the economic and environmental impact of tourism, the role of smart city technologies, and the effectiveness of stakeholder engagement in promoting sustainable tourism. Additionally, the research seeks to identify the challenges and best practices that can inform future tourism development efforts in Doha and other rapidly urbanising cities facing similar sustainability challenges.

Using a mixed-methods approach, this study incorporates qualitative interviews with key stakeholders—including city planners, government officials, environmental experts, and representatives from the private sector—and quantitative data on resource consumption, sustainability certification compliance, and tourism-related emissions. The analysis will provide insights into how sustainable practices have been implemented, what gaps remain, and what lessons can be drawn for future developments in the tourism industry, both in Doha and globally.

The following sections provide an overview of the literature on sustainable urban tourism, outline the methodological framework, and present the key findings related to Doha's integration of sustainability into its tourism development. The study concludes by offering policy recommendations for enhancing the long-term sustainability of urban tourism in Doha and other rapidly growing cities.

## LITERATURE REVIEW

Sustainable urban tourism is essential for cities aiming to balance economic growth with environmental sustainability, especially in rapidly developing regions. Urban tourism can provide significant economic benefits, but it also poses challenges related to environmental degradation and the strain on local infrastructure. This literature review examines relevant theoretical and empirical studies, focusing on rapidly growing cities like Doha. Key themes include the intersection of economic growth and environmental stewardship, the role of smart city technologies, and the importance of stakeholder engagement in sustainable urban tourism.

### Sustainable Urban Tourism in Rapidly Growing Cities

Sustainable urban tourism is becoming a key focus for cities aiming to promote tourism without jeopardising their natural and cultural resources (Sharpley, 2009). Rapidly developing cities, especially in the Middle East and Asia, face unique pressures from increased tourism, which can strain infrastructure and local ecosystems (Bramwell & Lane, 2013). As these cities continue to grow, balancing economic development with sustainable practices is crucial.

In cities like Doha, where tourism is part of a broader economic diversification strategy, the need for sustainable tourism is paramount (Qatar National Tourism Council, 2020). However, much of the existing literature focuses on mature tourism markets, leaving a gap in understanding how fast-growing urban centres implement sustainability strategies.


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## Economic Growth and Environmental Stewardship in Urban Tourism

Urban tourism presents a dual challenge of promoting economic growth while safeguarding environmental resources. Sustainable development theory emphasises the need to balance these priorities, ensuring that tourism's economic benefits do not come at the expense of the environment (Brundtland, 1987). Rapid urbanisation can lead to environmental degradation, including pollution, resource depletion, and habitat loss, particularly in cities with fragile ecosystems (Gössling, 2017).

Cities like Doha, which are undergoing rapid development, face challenges in aligning their economic growth objectives with environmental sustainability. The Qatar National Vision 2030 outlines goals for sustainable development, but there is limited research on how these goals are being achieved in practice (Qatar National Tourism Council, 2020). The literature often highlights the gap between theoretical sustainability goals and practical implementation, particularly in emerging tourism markets (Hall, 2019). This calls for further research into how cities like Doha are balancing short-term economic gains with long-term environmental stewardship.

## The Role of Smart City Technologies in Enhancing Sustainability in Tourism

Smart city technologies have been recognised as a vital tool for enhancing sustainability in urban tourism. These technologies, such as IoT, big data, and AI, help optimise resource use, manage tourist flows, and reduce environmental impact (Buhalis & Amaranggana, 2015). In the context of urban tourism, smart technologies can be used to monitor and manage infrastructure, reduce energy consumption, and improve transportation efficiency, all of which contribute to sustainable development (Gretzel et al., 2015).

Doha has begun integrating smart city technologies to manage urban development, especially in preparation for large-scale events like the FIFA World Cup 2022 (Qatar National Tourism Council, 2020). However, the application of smart technologies in tourism remains underexplored, particularly in cities outside of Europe and North America. While the potential for smart technologies to enhance sustainability is well documented, there is a lack of empirical research on their specific application in cities like Doha.

## Stakeholder Engagement in Sustainable Urban Tourism

Stakeholder engagement is critical for the success of sustainable tourism development, as it ensures that the needs and perspectives of various groups—local communities, businesses, tourists, and government bodies—are considered (Byrd, 2007). Stakeholder theory highlights the importance of participatory approaches, where all parties affected by tourism have a say in its development (Freeman, 1984).

In rapidly growing cities like Doha, the involvement of stakeholders in tourism planning is crucial for ensuring sustainability. However, the dominant role of government agencies and large corporations often marginalises local communities and smaller businesses, leading to potential conflicts (Tosun, 2000). Case studies from cities such as Barcelona and Amsterdam show that inclusive stakeholder engagement can mitigate these conflicts and promote more sustainable tourism practices (Hardy & Beeton, 2013). However, the literature on stakeholder engagement in emerging tourism markets like Doha is limited, representing a gap that needs further exploration.


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The literature on sustainable urban tourism provides valuable insights, but significant gaps remain when examining rapidly developing cities like Doha. First, while sustainable tourism is widely studied in established urban markets, there is a lack of research on how emerging cities implement these practices. Second, although smart city technologies hold great promise for enhancing sustainability, there is limited empirical evidence of their effectiveness in tourism management in the Gulf region. Finally, stakeholder engagement is recognised as crucial for sustainable tourism, but the extent to which local stakeholders are involved in tourism planning in cities like Doha remains unclear. Addressing these gaps is essential for developing a more comprehensive understanding of sustainable urban tourism in rapidly growing cities.

## Tourism Planning and Development in Doha

### Integrating Sustainable Practices in Tourism Development

Doha, the capital of Qatar, has increasingly positioned itself as a significant global tourism hub, particularly in preparation for large-scale events like the FIFA World Cup 2022. This development aligns with Qatar's broader economic diversification strategy, aimed at reducing reliance on oil and gas industries. Central to this transformation has been the integration of sustainable practices into Doha's tourism development strategies, ensuring that growth in the tourism sector does not come at the expense of environmental stewardship.

The foundation of Doha's approach to sustainable tourism is guided by the principles of sustainable development. Sustainable tourism aims to promote responsible travel that conserves the environment, respects local culture, and generates economic benefits for local communities (UNWTO, 2017). This perspective is particularly crucial for Doha, a city in a region facing unique environmental challenges, including limited natural resources and a harsh climate. Sustainable tourism strategies in Doha have thus focused on several key areas: resource management, infrastructure development, and community engagement.

First, efforts have been made to improve resource efficiency within the tourism sector, particularly regarding water and energy usage. Given that Qatar relies heavily on desalinated water, significant efforts have been made to implement water-saving technologies in hotels and tourist facilities (Al Kuwari, 2018). Additionally, energy-efficient buildings have been promoted, aligning with global standards such as the LEED certification for green buildings, which ensures that new developments meet sustainability criteria (Ritchie & Charles, 2018). Sustainable urban planning has also focused on ensuring that Doha's tourism infrastructure is aligned with smart city technologies, enabling more efficient use of resources through real-time monitoring systems.

Moreover, Doha has adopted sustainable practices in the transportation sector, essential for accommodating the growing number of tourists while limiting environmental impacts. The development of Qatar Rail, including the Doha Metro, has aimed to reduce traffic congestion and cut carbon emissions by encouraging public transportation use among both residents and visitors (Al Naimi, 2020). Such efforts reflect a broader commitment to integrating sustainability into the city's tourism development strategies, ensuring that growth in this sector is managed responsibly.


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## Policies and Standards Promoting Sustainability

At the heart of Doha's tourism development and sustainability efforts is the Qatar National Vision 2030 (QNV 2030), a comprehensive framework that outlines the country's long-term development goals. Launched in 2008, QNV 2030 emphasises four key pillars: human development, social development, economic development, and environmental development. The environmental development pillar, in particular, focuses on managing natural resources to ensure that future generations can enjoy a clean and healthy environment. This vision is directly tied to the tourism sector, as it underscores the importance of balancing economic growth with environmental conservation (Planning and Statistics Authority, 2019).

QNV 2030 has led to the development of several sustainability standards and policies aimed at promoting responsible tourism. One of the most important of these is the Qatar Green Building Council (QGBC), which sets standards for sustainable construction practices. By requiring new tourism developments to adhere to these green building standards, Doha aims to reduce the ecological footprint of new hotels, resorts, and other tourist attractions (Riffat & Fidzani, 2019).

Moreover, Qatar has implemented sustainable tourism strategies at the city level through initiatives such as the Doha Smart City Programme. This programme integrates smart city technologies into tourism planning, focusing on enhancing resource efficiency and improving the tourist experience. Smart city technologies include real-time environmental monitoring systems, which manage tourist flows and reduce pressure on key sites, and intelligent transportation systems, which help reduce traffic congestion and carbon emissions by promoting more efficient public transport solutions (Buhalis & Amaranggana, 2015).

At a policy level, Doha's commitment to sustainability has been reflected in its alignment with international environmental agreements and frameworks, such as the Paris Agreement. Qatar's National Climate Change Action Plan, announced in 2021, outlines efforts to reduce greenhouse gas emissions and promote renewable energy sources, with direct implications for tourism-related industries like hospitality and transportation (Qatar National Climate Change Action Plan, 2021). These policy frameworks underscore Doha's commitment to integrating sustainability into its tourism sector, balancing economic growth with environmental responsibility.

## Impact of the FIFA World Cup 2022 on Tourism and Sustainability Efforts

The FIFA World Cup 2022 provided Doha with a unique opportunity to showcase its tourism offerings to a global audience while highlighting its commitment to sustainability. As one of the largest global sporting events, the World Cup was expected to bring millions of visitors to Qatar, generating significant economic benefits. However, such a large influx of tourists also posed considerable challenges to the city's infrastructure and environment, making sustainability a critical concern.

In preparation for the World Cup, Doha invested heavily in green infrastructure, including the construction of energy-efficient stadiums. A notable example is the Khalifa International Stadium, which achieved a Global Sustainability Assessment System **(GSAS) certification**, reflecting its compliance with high environmental standards (Al Thani, 2020). This certification ensures that the stadium's design minimises energy consumption and maximises resource efficiency, setting a benchmark for future developments in the region.


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Moreover, the World Cup spurred significant advancements in public transportation infrastructure, particularly through the expansion of the Doha Metro. The metro system, which links key areas of the city and tourist attractions, was developed with sustainability in mind, reducing the reliance on private cars and, therefore, reducing carbon emissions during the event (Al Naimi, 2020). The introduction of electric buses and solar-powered infrastructure further contributed to reducing the environmental footprint of the World Cup (Sager, 2021).

Beyond infrastructure, the FIFA World Cup 2022 served as a platform for promoting sustainable tourism practices. The Supreme Committee for Delivery & Legacy, the body responsible for overseeing the event, incorporated sustainability into its planning by ensuring that all aspects of the event adhered to environmental sustainability goals, including waste reduction, resource management, and minimising the carbon footprint (Supreme Committee for Delivery & Legacy, 2020). The integration of green technologies and sustainable practices during the World Cup established a new standard for future events in Doha and the region.

In summary, the FIFA World Cup 2022 had a lasting impact on Doha's tourism development and sustainability efforts. It prompted significant investments in green infrastructure, encouraged the use of public transport systems, and fostered the adoption of sustainable practices across various sectors. The legacy of the World Cup is likely to continue shaping Doha's tourism strategies, reinforcing its commitment to sustainability as the city further develops its tourism industry.

## METHODOLOGY

This research employed a mixed-methods approach, integrating both qualitative and quantitative techniques to explore sustainable urban tourism development in Doha comprehensively. The combined methodology offered a deep examination of stakeholder perspectives while supporting these insights with empirical tourism data, thereby capturing the intricate balance between economic growth and environmental sustainability. The study's pragmatic foundation ensured that the findings were actionable, providing both theoretical insights and practical recommendations.

### Research Philosophy

The study is based on a pragmatic research philosophy, which focuses on real-world solutions and prioritises the integration of qualitative and quantitative data to address complex problems (Tashakkori & Teddlie, 2010). Pragmatism enables researchers to use both objective measurements and subjective insights, allowing the research methods to be determined by the nature of the research question (Saunders, Lewis, & Thornhill, 2019). In this study, the pragmatic approach was essential to examine the multidimensional nature of sustainable tourism in Doha, encompassing economic, environmental, and social aspects. This philosophy supports the use of qualitative interviews to capture stakeholder perspectives and quantitative data analysis to measure tangible outcomes.


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### Qualitative Methods: Stakeholder Interviews

The qualitative component of this research was conducted through semi-structured interviews with 30 key stakeholders directly involved in tourism development and environmental sustainability in Doha. These interviews allowed for an in-depth exploration of the strategies, challenges, and opportunities related to sustainable tourism in the city.

### Participant Selection Criteria

Participants were chosen using purposive sampling, which ensures that those with the most relevant expertise are included in the study (Creswell & Plano Clark, 2018). The selection criteria were designed to capture a wide range of perspectives from various sectors involved in tourism and sustainability. The 30 participants included:

- **City planners and government officials** are involved in shaping urban development and tourism policy at municipal and national levels.
- **Tourism officials** from the **Qatar National Tourism Council** and other tourism agencies are responsible for promoting tourism while ensuring alignment with sustainability goals.
- **Environmental experts**, including academics, consultants, and members of environmental NGOs are knowledgeable about the environmental impacts of tourism in urban settings.
- **Private sector representatives** from the hospitality industry, smart technology companies, and transportation firms are involved in implementing sustainable tourism initiatives.

The sample size of 30 participants was chosen to ensure a diversity of viewpoints and to reflect a comprehensive understanding of the interactions between tourism development, environmental stewardship, and smart city technologies. The inclusion of a larger sample allowed for greater depth in understanding the complexity of stakeholder interactions and the real-world application of sustainable tourism practices.

### Data Collection and Thematic Analysis

Semi-structured interviews were conducted with each of the 30 stakeholders. The interviews lasted between 45 to 60 minutes and were recorded (with participants' consent) to ensure accurate transcription. This format allowed for the structured exploration of key topics, while also providing flexibility to address new themes that emerged during the conversations.

The data were analysed using **thematic analysis** (Braun & Clarke, 2006). This approach is particularly useful for identifying and interpreting recurring themes in qualitative data. The analysis followed six steps:

1. **Familiarisation with the data**: Transcribing and reading through the interviews to gain a comprehensive understanding.


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2. **Generating initial codes**: Coding segments of the interviews that corresponded with the key research themes, such as "sustainability practices," "economic-environment balance," and "smart city technologies."

3. **Searching for themes**: Grouping related codes into broader themes.

4. **Reviewing themes**: Ensuring that the themes accurately reflected the data and captured the core issues in sustainable tourism.

5. **Defining and naming themes**: Clearly defining each theme to ensure consistency in interpretation across the interviews.

6. **Producing the report**: Integrating these themes into the broader research narrative, supported by direct quotes from the participants to illustrate key points.

The inclusion of 30 stakeholders allowed for the identification of varied perspectives on sustainable urban tourism, with a particular focus on the practical challenges and opportunities faced by different sectors in Doha.

**Quantitative Methods: Data Collection and Analysis**

The quantitative component of the research focused on analysing empirical data related to the economic and environmental impacts of tourism in Doha. This included the analysis of secondary data on tourism revenue, sustainability reports, and the use of smart city technologies. Quantitative data enabled the study to assess the measurable outcomes of tourism policies and sustainability practices, complementing the qualitative insights gained from the interviews.

**Economic Impact Assessment**

Tourism data covering the period from 2015 to 2022 were gathered from reports published by the Qatar National Tourism Council (QNTC) and relevant government agencies. The analysis focused on key economic metrics, such as:

- **Tourism revenue** and its contribution to Doha's GDP.
- **Employment generation** within the tourism and hospitality sectors.
- **Average tourist spending** and the economic multiplier effect of tourism.

These economic metrics provided a robust foundation for understanding the role of tourism in Qatar's economic diversification strategy and the broader impact of the sector on the national economy.

**Environmental Sustainability Reports**

Data on the environmental impacts of tourism were collected from both governmental reports (e.g., from the Ministry of Municipality and Environment) and independent environmental organisations. The key sustainability indicators included:

- **Energy consumption** across hotels, resorts, and other tourism-related facilities.


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- **Water usage** in tourist facilities, with a focus on the sustainability of water supply, given Doha's reliance on desalination.
- **Waste management**, including the extent of recycling initiatives and efforts to reduce the environmental footprint of tourism.
- **Carbon emissions** are associated with tourism, particularly in high-traffic tourist areas.

The analysis of these environmental metrics helped evaluate how well Doha's tourism industry aligns with the sustainability objectives outlined in the Qatar National Vision 2030.

**Smart City Technology Data**

The use of smart city technologies to enhance sustainability in urban tourism was also analysed. Data were sourced from the Doha Smart City Programme, focusing on technologies designed to improve resource management and reduce the environmental impact of tourism. Key data sources included:

- **Real-time environmental monitoring systems** that track tourist movements and manage congestion at key sites.
- **Smart infrastructure systems**, such as energy-efficient buildings and intelligent lighting systems, contribute to reductions in resource consumption.
- **Transport technologies**, including electric buses and smart traffic systems, aim to minimise the environmental impact of increased tourist traffic (Gretzel et al., 2015).

The quantitative analysis utilised descriptive statistics to examine reductions in energy consumption, improvements in air quality, and other key metrics. This analysis provided empirical evidence of how smart technologies contribute to sustainability in urban tourism settings.

**Key Metrics for Evaluating Sustainability**

By combining qualitative interviews with quantitative data analysis, this study evaluated sustainable urban tourism in Doha across multiple dimensions. The following key metrics were used:

- **Economic metrics**: Including GDP contribution, job creation, and tourist spending, to assess the economic benefits of tourism growth.
- **Environmental metrics**: Covering energy consumption, water use, waste production, and carbon emissions, to measure the environmental footprint of tourism.
- **Technological metrics**: Including data on the deployment of smart city technologies and their effectiveness in promoting sustainable tourism.
- **Stakeholder engagement metrics**: Assessing the involvement of local communities, government agencies, and private businesses in tourism planning and sustainability initiatives.


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This study employed a mixed-methods approach to examine sustainable urban tourism development in Doha, incorporating insights from 30 key stakeholders and supporting these with quantitative data on economic and environmental impacts. The integration of both qualitative and quantitative approaches provided a holistic view of the challenges and opportunities associated with balancing economic growth and environmental sustainability in the tourism sector. By adopting a pragmatic research philosophy, the study ensured that both practical and theoretical insights could inform future policy development and contribute to the ongoing dialogue on sustainable tourism in rapidly growing urban centres.

## FINDINGS

This section presents the results obtained through both qualitative interviews with key stakeholders and quantitative data analysis concerning the development and implementation of sustainable urban tourism practices in Doha. The findings are divided into three core themes: (1) the integration of sustainable practices in tourism development, (2) policies and standards promoting sustainability, and (3) the impact of the FIFA World Cup 2022 on tourism and sustainability efforts. Both qualitative insights from the interviews and quantitative data obtained from official reports are synthesised to provide a comprehensive understanding of the state of sustainable tourism in Doha.

### Integration of Sustainable Practices in Tourism Development

Qualitative findings from interviews with 30 key stakeholders, including urban planners, tourism officials, environmental experts, and private sector representatives, consistently highlighted Doha's efforts to incorporate sustainable practices into its tourism strategies. However, participants noted several challenges, such as uneven adoption of sustainability standards and infrastructural limitations in older parts of the city.

**Qualitative Responses:**

- Several city planners and environmental experts mentioned that sustainable tourism practices are most visible in new developments, particularly in central Doha. However, older infrastructure in peripheral areas lacks integration with the latest sustainability standards. An urban planner commented, *"While we've made substantial progress with new LEED-certified hotels and public spaces, older buildings pose a challenge in retrofitting energy-efficient systems."*
- Stakeholders from the Qatar National Tourism Council acknowledged the efforts to promote energy-efficient buildings but added that water management remains a critical issue, given Qatar's reliance on desalination plants. One respondent stated, *"We've implemented water-saving technologies in most modern hotels, but it's more challenging to apply these technologies to older establishments that still dominate the tourism landscape."*

**Quantitative Data:** The quantitative data support these observations. There has been a notable reduction in energy and water usage across the tourism sector in the last seven years. As shown in Table 1, energy consumption per tourist per day has decreased by approximately 20% from


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2015 to 2022. Similarly, water consumption has shown a gradual decrease due to the increasing use of water-saving technologies in newly built tourism facilities.

**Table 1**: **Energy and Water Usage in Doha's Tourism Sector (2015-2022)**

| Year | Energy Consumption (kWh per tourist per day) | Water Consumption (Litres per tourist per day) |
|---|---|---|
| **2015** | **35.2** | **200** |
| **2016** | **34.5** | **195** |
| **2017** | **33.8** | **192** |
| **2018** | **32.7** | **185** |
| **2019** | **30.5** | **180** |
| **2020** | **29.8** | **175** |
| **2021** | **28.5** | **168** |
| **2022** | **27.9** | **165** |

**Source:** *Qatar National Tourism Council (2022).*

While these numbers show positive trends, the interviews reveal that the full adoption of sustainable technologies remains inconsistent, particularly outside central Doha. Some interviewees emphasised the need for stronger public-private partnerships to drive innovation in water and energy management across the entire city. Despite these challenges, Doha's tourism industry has made notable strides in integrating sustainable practices, particularly in resource efficiency and the construction of environmentally friendly infrastructure.

**Policies and Standards Promoting Sustainability**

Qualitative interviews with policymakers and urban planners highlighted Doha's alignment with the Qatar National Vision 2030 (QNV 2030), which sets ambitious goals for sustainable development. Many stakeholders expressed optimism about the framework's potential but also raised concerns about its implementation, particularly in the tourism sector.

**Qualitative Responses:**

- A government official from the Ministry of Municipality and Environment commented, *"Qatar National Vision 2030 is the backbone of our sustainability goals, and the tourism sector is crucial in this. But the real challenge is ensuring compliance across all levels of development, especially in private sector projects."*
- Several interviewees also pointed out the important role of sustainability standards, such as those set by the Qatar Green Building Council. A tourism official mentioned, *"Most new hotels and tourist attractions are now required to meet sustainability certifications like LEED, which has led to significant improvements in the environmental footprint of the tourism sector."* However, enforcement and monitoring of these standards across the city remain uneven.

**Quantitative Data:** Quantitative data analysis of sustainability certification compliance indicates steady progress. As shown in Table 2, the percentage of new tourism-related developments complying with sustainability standards such as LEED has increased from 50% in 2015 to 80% in 2022. This demonstrates a significant improvement in integrating


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sustainability into new construction projects, particularly in the tourism and hospitality industries.

**Table 2: Sustainability Certification Compliance in New Developments (2015-2022)**

| Year | Number of New Tourism Developments | Percentage with LEED or Equivalent Certification (%) |
|---|---|---|
| **2015** | **12** | **50%** |
| **2016** | **15** | **55%** |
| **2017** | **18** | **60%** |
| **2018** | **20** | **65%** |
| **2019** | **22** | **68%** |
| **2020** | **25** | **70%** |
| **2021** | **28** | **75%** |
| **2022** | **32** | **80%** |

**Source:** *Qatar Green Building Council (2022).*

Stakeholders acknowledged that while progress has been made in implementing these sustainability certifications, retrofitting older buildings remains a significant challenge. One environmental expert commented, *"Retrofitting projects can be costly and complicated, particularly when the buildings weren't initially designed with sustainability in mind."* Despite these challenges, stakeholders widely agreed that the Qatar National Vision 2030 continues to play an essential role in guiding sustainable tourism development.

**Impact of the FIFA World Cup 2022 on Tourism and Sustainability**

The FIFA World Cup 2022 had a transformative effect on Doha's tourism infrastructure, and the event was hailed by stakeholders as a catalyst for further integrating sustainability into tourism development. The government, along with the Supreme Committee for Delivery & Legacy, prioritised sustainability goals in the planning and execution of the event, which in turn accelerated the adoption of green technologies and sustainable practices.

**Qualitative Responses:**

- An official from the Supreme Committee for Delivery & Legacy noted, *"Sustainability was one of the core pillars of our strategy for the World Cup. From the design of the stadiums to transportation networks, we sought to minimise the environmental impact and leave a lasting legacy of sustainability."*
- Representatives from the hospitality sector also indicated that the World Cup prompted investments in energy-efficient technologies, not just for stadiums but also for hotels, transport, and other facilities. One hotel manager remarked, *"The World Cup brought a lot of attention to how we operate, and it pushed us to upgrade our systems for energy and water management. This investment will benefit us long after the event."*

**Quantitative Data:** Quantitative data show that the World Cup significantly reduced the environmental impact of tourism during the event, particularly in terms of transportation emissions. The introduction of electric buses and the expansion of the Doha Metro helped to reduce CO2 emissions by 20% compared to previous events of a similar scale, as shown in Table 3.


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**Table 3: Comparison of Transportation Emissions for Major Events (2018-2022)**

| Event | Average CO2 Emissions (Metric Tonnes per Day) | Percentage Reduction Compared to Baseline |
|---|---|---|
| **2018 Gulf Cup** | **500** | **-** |
| **2019 Asian Cup** | **480** | **4%** |
| **2020 Doha Forum** | **460** | **8%** |
| **2021 FIFA Club World Cup** | **430** | **14%** |
| **2022 FIFA World Cup** | **400** | **20%** |

**Source:** *Supreme Committee for Delivery & Legacy (2023).*

The Khalifa International Stadium, which received GSAS certification for its environmentally friendly design, emerged as a model for sustainable construction in the region. Additionally, stakeholders praised the Doha Metro for significantly reducing traffic congestion and carbon emissions during the World Cup.

However, some stakeholders expressed concerns about maintaining the sustainability momentum post-World Cup. One city planner remarked, *"While the World Cup accelerated sustainability practices, it's critical that we continue these efforts and don't lose focus now that the event is over."* These sentiments highlight the need for sustained government support to ensure the long-term benefits of the investments made for the World Cup are realised.

The findings illustrate that while Doha has made significant progress in integrating sustainable practices into its tourism development strategies, several challenges remain. Sustainability standards like LEED certifications are increasingly being adopted in new tourism-related developments, but the retrofitting of older infrastructure remains a major challenge. The FIFA World Cup 2022 had a significant positive impact on sustainability, driving investments in green technologies and infrastructure. However, continued efforts are necessary to maintain this progress and ensure that sustainability remains a central focus of Doha's tourism sector in the future.

## DISCUSSION

The discussion section integrates the findings from the qualitative interviews and quantitative data analysis with existing literature on sustainable urban tourism. This section interprets the key findings in light of the research questions, addressing how Doha has integrated sustainable practices, the challenges faced, the effectiveness of policy frameworks, and the impact of the FIFA World Cup 2022 on tourism and sustainability efforts. The discussion also compares these findings to other global cases of urban tourism development to highlight best practices and identify areas where Doha can further enhance its sustainability efforts.

### Integration of Sustainable Practices in Tourism Development

The integration of sustainable practices into tourism development in Doha has been an area of significant focus, particularly as the city seeks to position itself as a global tourism hub while balancing the demands of environmental sustainability. Both qualitative responses and


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quantitative data indicate that progress has been made in areas such as resource efficiency, green building construction, and the use of smart city technologies.

**Qualitative Insights**:

- Many participants emphasised that sustainable practices are increasingly visible in new tourism developments, such as LEED-certified hotels and the implementation of energy-efficient systems. One city planner noted, *"In new projects, we're seeing a shift towards sustainability. The use of smart technologies to monitor and manage energy consumption is becoming more common, but older buildings remain a problem."* This observation aligns with the broader academic understanding of sustainable tourism, which suggests that cities with modern infrastructure can more easily integrate sustainability practices (Buhalis & Amaranggana, 2015).
- However, stakeholders also raised concerns about the difficulty of retrofitting older buildings to meet current sustainability standards. This reflects similar challenges faced by other rapidly growing cities where legacy infrastructure poses a barrier to achieving widespread environmental goals (Hall, 2019).

**Comparison with Global Trends**: In comparison with other global tourism hubs, Doha's challenges mirror those of cities like **Barcelona** and **Dubai**, where tourism-driven urban growth has created a need for large-scale infrastructure retrofitting (Sharpley, 2009). This highlights the importance of continuous investment in both new and existing infrastructure to meet global sustainability standards.

**Quantitative Data**: As shown in Table 4 (reproduced from the findings), the reduction in energy and water consumption across the tourism sector indicates positive momentum towards sustainability. The 20% reduction in energy consumption per tourist from 2015 to 2022 highlights the effectiveness of resource-saving technologies, particularly in newly constructed tourist facilities.

**Table 4: Energy and Water Usage in Doha's Tourism Sector (2015-2022)**

| Year | Energy Consumption (kWh per tourist per day) | Water Consumption (Litres per tourist per day) |
|---|---|---|
| **2015** | 35.2 | 200 |
| **2016** | 34.5 | 195 |
| **2017** | 33.8 | 192 |
| **2018** | 32.7 | 185 |
| **2019** | 30.5 | 180 |
| **2020** | 29.8 | 175 |
| **2021** | 28.5 | 168 |
| **2022** | 27.9 | 165 |

These improvements reflect Doha's increasing commitment to sustainability, but the qualitative data underscore that achieving city-wide sustainability will require more comprehensive efforts, particularly in retrofitting older buildings to meet new standards.


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**Policies and Standards Promoting Sustainability**

The findings indicate that Qatar National Vision 2030 (QNV 2030) and its associated sustainability frameworks have provided a strong policy backbone for promoting sustainable tourism. However, as noted by several stakeholders, the **implementation** of these policies varies significantly across different sectors, and challenges remain in enforcing compliance with sustainability standards.

**Qualitative Insights**:

- Government officials and policymakers pointed to the Qatar Green Building Council and its promotion of LEED certifications as a key driver in improving the sustainability of new developments. One participant noted, *"We've seen a marked increase in compliance with sustainability certifications, especially as investors now recognise the long-term benefits of green buildings."* However, they also expressed concerns about inconsistent enforcement, with some developers circumventing sustainability requirements.
- This reflects global trends where compliance with sustainability regulations is often uneven, particularly in emerging markets where rapid development sometimes outpaces regulatory enforcement (Ritchie & Charles, 2018).

**Quantitative Data**: As shown in Table 5, the percentage of new tourism developments adhering to sustainability standards such as LEED certification has increased steadily from 50% in 2015 to 80% in 2022. This demonstrates growing awareness and compliance within the tourism and hospitality sectors.

**Table 5: Sustainability Certification Compliance in New Developments (2015-2022)**

| Year | Number of New Tourism Developments | Percentage with LEED or Equivalent Certification (%) |
|---|---|---|
| **2015** | 12 | 50% |
| **2016** | 15 | 55% |
| **2017** | 18 | 60% |
| **2018** | 20 | 65% |
| **2019** | 22 | 68% |
| **2020** | 25 | 70% |
| **2021** | 28 | 75% |
| **2022** | 32 | 80% |

**Policy Implementation Challenges**: Despite these positive trends, qualitative insights from interviewees suggest that the full implementation of Qatar National Vision 2030 remains an ongoing challenge. Several stakeholders raised concerns about older buildings and peripheral areas not benefiting as fully from the sustainability standards enforced in central Doha. An urban planner observed, *"While we've made great strides in downtown areas, we still face difficulties bringing older developments up to the same standards."*

These findings align with research from Sharpley (2009) and Hall (2019), which suggests that achieving comprehensive sustainability in urban tourism requires continuous investment and


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more rigorous enforcement of sustainability policies, particularly in areas where older infrastructure prevails.

Impact of the FIFA World Cup 2022 on Tourism and Sustainability

The FIFA World Cup 2022 acted as a pivotal moment for Doha's tourism and sustainability initiatives, providing a platform to showcase the city's commitment to green technologies and sustainable infrastructure. According to the qualitative responses, stakeholders were overwhelmingly positive about the event's long-term impact on Doha's sustainable tourism development.

**Qualitative Insights**:

- A Supreme Committee official stated, *"The World Cup allowed us to integrate sustainability into everything from transportation to stadium design. We're confident that the infrastructure improvements will benefit tourism and sustainability for decades to come."* This highlights how large-scale events can serve as catalysts for sustainability (Al Thani, 2020).
- Hotel managers and transportation officials echoed these sentiments, stating that the World Cup pushed the hospitality and transport sectors to upgrade their systems for energy efficiency and resource management.

**Quantitative Data**: The quantitative data supports these claims, particularly in the area of transportation emissions. As shown in Table 6, the use of electric buses, solar-powered stadiums, and the expansion of the Doha Metro led to a 20% reduction in CO2 emissions compared to previous large-scale events in the region.

**Table 6: Comparison of Transportation Emissions for Major Events (2018-2022)**

| Event | Average CO2 Emissions (Metric Tonnes per Day) | Percentage Reduction Compared to Baseline |
|---|---|---|
| **2018 Gulf Cup** | 500 | - |
| **2019 Asian Cup** | 480 | 4% |
| **2020 Doha Forum** | 460 | 8% |
| **2021 FIFA Club World Cup** | 430 | 14% |
| **2022 FIFA World Cup** | 400 | 20% |

**Source**: *Supreme Committee for Delivery & Legacy (2023).*

The reduction in carbon emissions and improved public transportation systems are in line with best practices observed in other cities that have hosted major global events, such as the London 2012 Olympics, which also saw significant investment in green infrastructure (Smith & Fox, 2013). The Khalifa International Stadium, which earned GSAS certification, has become a benchmark for sustainable construction in the region, with several stakeholders expressing the hope that future projects in Qatar will follow similar standards.

**Long-term Implications**: While the **qualitative data** indicates that the World Cup has had a positive impact on sustainability, several participants cautioned that maintaining this


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momentum may be challenging. A tourism official noted, *"The World Cup was a unique event, and it brought with it international scrutiny and investment. But the challenge now is keeping up the same level of commitment to sustainability in day-to-day tourism activities."*

This concern is echoed in the broader literature on sustainability in tourism mega-events, which highlights the risk that sustainability efforts may not be sustained once the event has concluded (Smith & Fox, 2013). Continuous investment and policy enforcement will be essential to ensure that the sustainability advancements made for the World Cup have long-lasting benefits for Doha's tourism sector.

The findings from this study reveal that Doha has made significant strides in integrating sustainable practices into its tourism development strategies, particularly through the Qatar National Vision 2030 and the catalytic impact of the FIFA World Cup 2022. However, challenges remain, particularly in ensuring consistent enforcement of sustainability standards across all sectors of the tourism industry and retrofitting older infrastructure to meet modern environmental requirements. The World Cup has provided a strong foundation for future sustainability efforts, but maintaining this momentum will require continued collaboration between the public and private sectors, along with stronger policy enforcement to ensure that sustainability remains a core priority in Doha's long-term tourism strategy.

## CONCLUSION

This study explored the integration of sustainable practices in Doha's tourism sector, focusing on how the city has responded to both environmental challenges and economic opportunities. The research revealed significant progress in sustainable tourism development, driven by key initiatives such as the Qatar National Vision 2030 and the transformative impact of the FIFA World Cup 2022. The event served as a catalyst for large-scale investments in green infrastructure, public transportation, and resource-efficient technologies, which have improved Doha's environmental footprint while enhancing its global tourism appeal.

However, the findings also highlight ongoing challenges. While new tourism developments largely comply with sustainability certifications such as LEED, the retrofitting of older buildings to meet modern environmental standards remains problematic. Similarly, there are disparities in the enforcement of sustainability standards across different parts of the city, particularly outside of central Doha. Addressing these challenges will require continued investment, particularly in public-private partnerships, to ensure that sustainability practices are uniformly applied across the tourism sector.

Moreover, while the FIFA World Cup 2022 demonstrated the potential for sustainable mega-events, the long-term success of these initiatives depends on maintaining the momentum generated by the event. Stakeholders must continue to prioritise sustainability in both infrastructure development and policy implementation to ensure that Doha's tourism sector can grow responsibly, without exacerbating environmental degradation.

In summary, Doha has made commendable progress in integrating sustainability into tourism but achieving a fully sustainable tourism sector will require addressing challenges related to older infrastructure, enforcement of policies, and the long-term application of lessons learned from the World Cup. The findings from this study provide valuable insights for policymakers,


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urban planners, and tourism officials aiming to foster sustainable urban tourism, not only in Doha but in other rapidly developing cities facing similar challenges.

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