



Article

# Integrated Recreation Cities and Sustainable Development in Saudi Arabia: Contributions, Constraints, and Policies

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Abstract: Despite the importance of integrated recreation cities (IRC) to the wellbeing of individuals, families, and society, there is only one IRC which is under development in Saudi Arabia (KSA). This research aims to study the potential contributions of IRCs to sustainable development in KSA, the constraints facing them, and effectuation policies to support their applications. To achieve this goal, the research used a documentary inductive approach, which includes a review of related literature and an applied approach that includes field surveys of a random sample of 160 experts and officials. In addition to articulating the most significant contributions of IRCs and the most important constraints facing them, the research was able to provide a number of policies and measures useful in guiding the development of new IRCs in KSA and Dammam Metropolitan Area (DMA) in support of sustainable development. The contributions of this research are aligned with that put forward by the 2030 Vision of KSA, which considers the promotion of "recreational development" a necessary step to achieve environmental, economic, and social sustainability for the Saudi society.

**Keywords:** urban land use planning; integrated recreation cities; sustainable development; Dammam Metropolitan Area; Kingdom of Saudi Arabia; 2030 Saudi vision



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#### 1. Introduction

Based on the authors' comprehensive review of a number of large-scale recreation cities from around the world [1–7], a large-scale recreation city is an integrated multifunctional project with huge areas containing many of the most complex and creative establishments and the latest high-efficiency and quality games and attractions. Its purpose is to provide recreational and economic benefits through their integration into social, environmental, economic, planning, and administrative aspects. In this research, the term Integrated Recreation City (IRC), though not commonly used worldwide, is introduced, and used by the authors.

## 1.1. Research Problem

Despite implementing IRCs in many countries of the world for their significant developmental impacts, the regions of KSA lack large integrated modern recreation cities with global standards such as Disneyland in the USA, Europa Park in Germany, and other major integrated recreation cities (IRCs) around the world. This type of recreational development are attractions for tourists and residents alike, providing means of recreation and enjoyment to all ages. The only IRC in KSA is the "Qiddiya recreation city" located 45 km south of Riyadh, the capital of KSA. The Qiddiya project started in 2019 as a huge recreational

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investment and is expected to take about 10 years to implement and aims to start operating in 2030 [8].

With the Kingdom's population growth expected to reach 42,346,205 inhabitants in 2030, and with the growth of the Kingdom's various regions, where the Eastern Province (EP) alone is expected to reach 6,395,986 million inhabitants in 2030, there is an emerging and increasing demand for IRCs as demanded development projects [9,10].

To understand the research problem more clearly, the researchers applied the causes and effects technique [11]. The researchers started by reviewing relevant literature on the causes behind the absence of recreational development projects and the effects of such absence on urban sustainability. Then, brainstorming sessions were used to examine whether these causes and effects apply to the Saudi context; a brief outline of the findings are as follows.

#### 1.1.1. What Are the Reasons behind the Absent of IRCs in KSA?

For a long time, since the 1970s until recently, recreational development in general and IRCs in particular have not attracted enough attention in the urban planning agenda of KSA due to the following reasons:

• Environmental reasons: Falling in the desert arid climate zone, characterized by high temperature all year round and high humidity levels in the summer, especially in coastal areas, this difficult climate in most areas of the Kingdom in general makes it difficult to use outdoor recreational activities most of the year. However, some regions of KSA, such as Dammam, Al-Ahsa and other regions in the EP, enjoy a mild climate most of the year. Table 1 shows climate records for the extended period (1985–2019) for Al-Ahsa and (2000–2019) for Dammam [12,13].

N.	Name of	S	ite	Haiaht (m)	Temperature (°C)		Amount of	T' D ' 1
No.	Monitoring Station Latitu	Latitude	Longitude	Height (m)	Max	Min	Rainfall (mm)	Time Period
1	Dammam	26.50	49.80	10	34.5	20.3	91.5	2000–2019
2	Al-Ahsa	25.30	49.49	180	35.2	19.9	86.6	1985–2019

Table 1. Long climate records for Dammam and Al-Ahsa monitoring stations.

Source: [12].

- Economic reasons: The high cost of construction, processing, and operation of IRCs as huge projects that require billions of dollars, the decline of the state to invest in such projects, and the careful nature of private capital/investors are among the reasons behind the absence of these major projects in KSA. For example, the initial phase of the Qiddiya Recreation City project is expected to cost about USD 10 billion, where the infrastructure alone will cost USD 8 billion, and this huge project could not have been initiated without the full financial support of the Saudi Investment Fund [14].
- Social reasons: Conservative convictions formerly prevailing in KSA were somehow reserved towards open recreational activities such as IRCs. However, in recent years there has been a change in national convictions on the part of the state and citizens who welcomed the trend towards promoting recreational activities that fall in accordance with Saudi customs and traditions. Evident to this is the emergence of the General Recreation Authority, which was established on 7th May 2016 to promote the goals of the Saudi 2030 Vision by developing and organizing the recreation sector and supporting its infrastructure throughout the Kingdom, in cooperation with various government and private agencies, and in accordance with an approved strategy aimed at contributing to improving the quality of life [15].

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# 1.1.2. What Are the Effects of the Absence of IRC's in KSA on Life and Environmental Qualities?

The limited numbers of recreational development projects and the lack of modern IRCs in particular, would result in several effects such as:

- Effects on the environment: This includes the lack of natural green and water areas that accompany the construction of recreational projects, resulting in the imbalance of the biosphere and increased air pollution in areas around cities. It would also limit the useful exploitation of the Kingdom's vast desert land resources, where parts of it, particularly coastal and close to current cities such as Dammam, have the potential to be transformed from barren lands into environmentally friendly reclaimed areas suitable for human inhabitance [16–18].
- Effects on the economy: This includes the misuse of state and individuals' financial resources and the weak targeting of investments in recreational services and, thus, the weak financial returns of those investments for the state and citizens. Additionally, it would miss the opportunities for continuous and sustainable economic development in regions such as the EP of KSA, increasing the incompatible management of the Kingdom's natural resources and its environmental potentials. Moreover, failure to take advantage of the opportunities associated with the development of IRC projects would delay economic growth and hinder the distribution of the benefits of such growth to all strata of the society, which contributes to increasing income inequality of individuals [16,19,20].
- Effects on the society: This includes the reduction in citizens' ability to recreate and relax and, eventually, in their ability to carry out many functions that complement various physical and psychological human needs reducing their enthusiasm and desire to serve their community, and generally affects their productivity. Other negatives would include the inaccessibility to various skills and experiences of a large segment of the society, especially young people, leading to increasing unemployment rates in the long run, the exacerbation of the demand for government functions/services and a decline in the sense of belongingness [21–23].

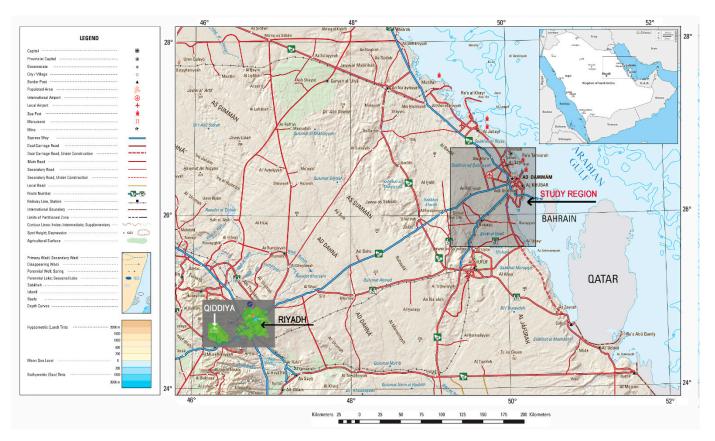
#### 1.2. Research Aim and Scope

The research aims to identify the most important contributions of IRCs to sustainable environmental, economic, and social development, the constraints facing their application, and the appropriate policies to make their activation a success on the ground. This supports the research's conviction that IRCs are a good tool to achieve the sustainable development of KSA's cities and regions and is a trend which is consistent with the Kingdom's vision 2030 that "expanding recreational activities with global standards within the local environment contributes to improving quality of life" [24].

The study will focus on the planning of IRCs and their implications for the sustainability of society and the environment, considering the goals of the Kingdom's Vision 2030 in terms of promoting recreation, diversifying the economy, improving quality of life, and others. The application of the study is directed towards DMA and its surrounding region in the EP of KSA as a spatial focus, which requires taking the opinions of a random sample of concerned experts and officials and reviewing the urban and regional plans of DMA (Figure 1). The study was prepared from 2017 to 2022, and its references are derived from literature covering the aspects of the study from the end of the 1960s to the present, reaching the 2030 target year (Figure 2).

To achieve its aim, the research used multiple methods to collect, analyze, synthesize, extract, and display data, including a mental inductive approach, documentary descriptive approach, descriptive applied approach, analytical approach, structural approach, and the extractive approach [25].

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**Figure 1.** The spatial scope of the study region in reference to the Riyadh and the Qiddiya Recreational City. Source: Prepared by authors based on [26].



**Figure 2.** Temporal scope of the research. Source: By the authors.

## 1.3. Research Significance and Contributions

Research significance and expected implications are evident in the following:

- Contribution to the current literature: This study adds to the body of published knowledge about the concept of IRCs and the extent to which it is used as a tool for achieving sustainable development in KSA and seeks to root the concept in a framework that preserves local identity and opens the way for studies in the field of recreation, sustainability, and quality of life in developing societies with similar socio-economic and environmental contexts.
- Practical/applied implications: The researchers hope that the results and recommendations of this study will contribute to achieving the goals of KSA's National Vision 2030 in promoting recreational services, and to adding a new resource that achieves eco-

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nomic diversity, deepens sustainable development, and improves the quality of life in the DMA region as an example to be followed in the rest of KSA and similar countries.

# 1.4. IRC and Sustainable Development in KSA and the World

The IRC includes leisure and sports activities of all kinds, as well as huge architectural hospitality and tourism projects from resorts and others, including the most famous restaurants and shops franchises to enjoy shopping adventure, and recreational theme parks with high-end technology, water parks and aquariums, opportunities for road trips, as well as activities for motorsport enthusiasts. These attractions are beautifully designed to create an atmosphere of joy and pleasure to adults as well as children [18].

What makes an IRC different from a theme park is not only its size, as the former is much larger than the latter, but the IRC is also characterized by its many uses, functions, and spaces which are integrated together to tell a special story and create a unique user experience. Several aspects, processes and services contribute to achieving a better quality of life in such environments. Design and planning according to high standards is essential to reach the desired IRC, integration of architecture, urban design, landscape, land use distribution, infrastructure planning, service planning, pedestrian and automotive traffic planning, and other processes all support the achievement of the IRC objectives [27].

The Saudi government seeks to achieve a comprehensive development of the Kingdom within Vision 2030, an ambitious national vision that fulfills the wishes of citizens, delights their families and children and gives them a wide range of high-end recreation that considers local and Islamic values. As part of the ambitious aspirations of Vision 2030 to transform the Kingdom into a leading global model in various aspects of life, the "Neom" project launched on 24 October 2017, a huge project where the Neom region will focus on nine specialized investment sectors targeting the future of human civilization, the future of energy and water, the future of mobility, the future of biotechnologies, the future of food, the future of technical and digital sciences, the future of advanced manufacturing, the future of media and media production, and the future of recreation and the future of living [28].

Perhaps the latest in the field of investment and recreation as seen by the Kingdom's vision 2030 is the establishment of the "Qiddiya recreation city" (inaugurated in 2019) which is a huge recreational investment project to be built in Al-Qiddiya, southwest of Riyadh, with a total area of 367 km² (223 km² planned developed area). It includes four main sectors: recreation, motorsport, sports, and housing and hospitality, with international specifications, which will make it one of the largest projects of its kind in the Kingdom, competing with the world's largest tourist attractions and recreational and cultural destinations [8], Figure 3.

To set a baseline of the definition and the parameters of an IRC, Table 2 provides a comparative summary of 21 integrated recreation cities in 15 countries from four contents ordered according to date of establishment [25] (p. 121). The table indicates that the average area of IRC, without Disneyworld Florida and Qiddiya Recreation City, is 161 hectares, the average distance of IRC from the nearest city ranges from 3 to 48 km, and the average distance from the nearest airport is 2–70 km. In addition, from the review of these worldwide cases, a typical IRC would contain basic land uses including areas for open spaces and water entertainment, gaming facilities, shopping, arts and cultural activities, exhibition, hospitality, other service areas, green areas, a childcare area, and a street network [25] (pp. 133–134).

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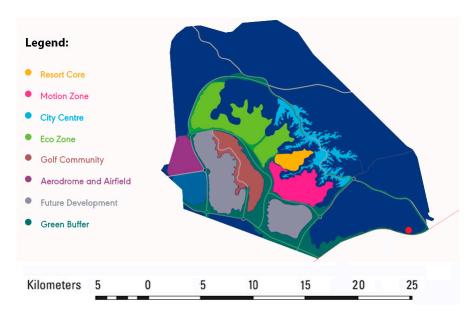


Figure 3. The main elements of Qiddiya Recreation City. Source: [8].

The IRC with its vast recreational, sports, hospitality, and tourism services targets residents of a large region of the country with its urban and rural communities and attracts economic income, stimulates and develops its users intellectually and emotionally, facilitates social interaction, and promotes the exchange of ideas and values. There is no doubt that these services and functions are highly significant to modern human societies, so it is expected that the IRC will contribute to improving the quality of life of the population environmentally, economically, and socially:

- Environmental sustainability: IRCs contribute to the preservation of the biosphere
  through creating a balanced and more diverse ecosystem for organisms to thrive. IRCs
  also provide the opportunity to utilize the countries' natural and manmade resources,
  which ensures the optimization of resource utilization and prevents wasted lands and
  negligence of costal lines. Creating grand open spaces with green cultivated land
  and water bodies as elements of IRCs enriches the quality of the air and reduces air
  pollution [29,30].
- Economic sustainability: IRCs deliver the continued economic benefit sought through sustainable development, which coordinates resource use, investment trends, and the management of the environment system, representing new opportunities to improve economic growth and distribute its benefits among the society as a whole. Investment in recreation is a social and economic need on the one hand and a source of tourism development on the other, which is one of the key factors to boost local income and improve the country's image as a local and global tourist destination [19] (p. 5), [31–33].
- Social sustainability: Investing in IRC projects will contribute to achieving psychological and physiological balance of the individual, especially when faced by increasing worries, psychological pressures, aggravated stress and fatigue, making it possible to manage these pressures with balance [23]. Members of society will therefore benefit more by investing their time in appropriate forms of recreation. In addition, this new form of service contributes to developing workers' skills, giving them opportunities to gain experience and secure new jobs. Thus, unemployment rates will be reduced in the medium and long term, employment will be reduced for government agencies, and the Kingdom will have responsible self-reliant generations, and family ties will be strengthened, reinforcing the sense of belongingness to the homeland. Such major projects offer new ideas and visions for the future that will contribute to creating a socially balanced and secure environment, as well as being an effective means of education and entertainment at the same time through the diversity of events in recreation cities [21,34].

**Table 2.** Summary of some characteristics of 21 worldwide integrated recreational cities.

No.	The Name of the City	Establishment Date	Country	Continent	Area (Hectares)	Distance from the Nearest City (km)	Distance from the Nearest Airport (km)
1	Disneyland California	1955	United States	North America	202	3	24
2	Six Flags Entertainment, Arlington	1961	United States	North America	86	6	19
3	Disneyworld Florida	1971	United States	North America	10117	30	27
4	Europa-Park	1975	Germany	Europe	85	40	21
5	Everland City	1976	South Korea	Asia	91	6.4	68.8
6	Canada's Wonderland	1981	Canada	North America	134	48	31
7	Tokyo Disneyland	1983	Japan	Asia	200	18	23.5
8	Kuwait Entertainment City	1984	Kuwait	Asia	100	26	32
9	Heli Entertainment City	1985	Abu Dhabi-UAE	Asia	86	10	24
10	Parc Astérix	1989	Paris-France	Europe	18	41	18
11	Beto Carrero World	1991	Brazil	South America	1400	14.5	11
12	Euro Disney Paris	1992	France	Europe	76	32	39
13	Port Aventura World	1995	Spain	Europe	119	11	9
14	Dreamland Aqua Park	1997	UAE	Asia	25	22	2
15	Hong Kong Disneyland	2005	Hong Kong	Asia	28	22	15
16	Beijing Happy Valley	2006	China	Asia	56	12	32
17	Chimelong Paradise	2006	China	Asia	60	25	39
18	Vialand	2013	Turkey	Asia	60	14	43
19	Yas Water World	2013	Abu Dhabi-UAE	Asia	15	38	12
20	Disneyland Shanghai	2016	China	Asia	390	33	18
21	Qaddiya Recreation City *	2019	Saudi Arabia	Asia	33400	45	70
	Average area	1955–2019	15 countries	4 continents	161 hectares **	3 to 48 km	2–70 km

Source [25] (p. 121). \* Qiddiya Recreation City will be opened to the public in 2030. \*\* Average Area without Disney World Florida and Qiddiya.

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#### 2. Research Design and Methods

#### 2.1. Data Collection and Sampling

To identify the contributions of IRCs in KSA to sustainable environmental, economic, and social development, the researchers used a questionnaire survey targeting a sample of experts, officials, businessmen, and practitioners who are familiar with tourism and recreation from various sectors in KSA. In addition, the questionnaire helps identify the expert opinions on the constraints facing the implementation of IRCs and examine how experts view the appropriateness of measures and policies proposed to manage and enable IRCs projects in the Kingdom in general and in DMA in particular.

A questionnaire is the ideal tool to collect primary data from a large number of people in a limited time frame [35]. A pilot study with a small group of specialized experts was carried out first to determine the clarity of the questionnaire and its compliance with the objectives of the study, the consistency of its statements and their validity for the section to which they belong. After making the necessary adjustments, the final questionnaire consisted of four main sections as follows [25]:

- The first section gathered data on the participants (gender, age, scientific qualification, employer, experience).
- The second section aimed to assess the IRCs contributions to sustainable development with three sub-sections: improving the environmental dimension (9 statements), improving the social dimension (12 statements), and improving the economic dimension (11 statements).
- The third section asked about experts' opinions on the constraints against the application of IRCs in KSA and DMA (15 statements).
- The fourth section assessed the proposed policies to promote the application of IRCs in KSA and DMA (20 statements).

Google Forms was used to create the electronic questionnaire, share the survey, and collect the results, as a quick economic and eco-friendly method (IRC Expert Survey). The survey link was disseminated via email to experts in several organizations and ministries around the Kingdom to ensure balanced geographic representation.

The questionnaire was sent to a random sample of 160 experts, officials, and decision makers, all of whom completed all sections. The sample of the study can be described as follows:

- **Gender**: The majority of respondents are male 91.3%, while females are 8.8%.
- Age range: About 42.5% of the total sample members are aged 50 and above, (38.1%) are between 40 and under 50 years, 13.8% are between 30 and under 40 years, and 5.6% of them are under the age of 30. This result shows that almost half of the sample were 50 and above, hence, the high level of experience and the possibility of more accurate and effective results.
- Qualification level: More than 60% of the respondents hold a higher postgraduate degree, about 33.8% of the respondents have a PhD, 28.1% have a master's degree, and 38.1% of the sample have a bachelor's degree.
- **Job sector**: The majority of the study sample (about 61.9%) work in the government sector, 31.9% of them work in the private sector, 0.6% work for Aramco, 1.3% were self-employed, 1.3% were government retirees and 3.1% were private sector retirees.
- Work experience: About 52.5% of the respondents have 25 years of experience or more, and 31.3% have 15–25 years of experience, and 16.3% of them have 10–15 years of experience.

#### 2.2. Data Analysis

Statistical Package for the Social Sciences (SPSS) software was used to test and validate the research tool and the responses and to statistically analyze the extracted data. First, internal consistency of each of the questionnaire's three main sections and its statements

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was evaluated using Pearson Correlation coefficient. Table 3 shows the values of the correlation coefficients between each statement and its section. All values were positive and statistically significant, at a 0.01 confidence level, which means a high degree of internal consistency and correlation within each section.

The reliability coefficient of the study sections and sub-sections was determined by applying Cronbach' Alpha equation, the overall reliability of the questionnaire was (0.966), as shown in Table 4, being higher than (0.70), indicating good internal consistency and reliability for all statements [36].

Table 3. Correlation coefficient between each statement of the questionnaire and the overall section.

Section	Sub-Section	Statement Number	Correlation Coefficient	Statement Number	Correlation Coefficient
		1	0.767 **	6	0.709 **
		2	0.856 **	7	0.849 **
	Improving the environmental	3	0.787 **	8	0.757 **
	dimension of	4	0.832 **	9	0.872 **
	sustainability	5	0.655 **	-	-
			t of improving the oustainability with t		0.859 **
		1	0.708 **	7	0.814 **
First:		2	0.771 **	8	0.780 **
IRCs' contributions to	Improving the social	3	0.803 **	9	0.780 **
promoting sustainable development	Improving the social dimension of sustainability	4	0.809 **	10	0.694 **
development		5	0.806 **	11	0.728 **
		6	0.780 **	12	0.745 **
		Coefficient of i	0.919 **		
		1	0.816 **	7	0.884 **
		2	0.801 **	8	0.812 **
		3	0.794 **	9	0.844 **
	Improving the economic dimension of sustainability	4	0.805 **	10	0.722 **
		5	0.839 **	11	0.734 **
		6	0.806 **	-	-
		Coefficient of im	0.876 **		
		1	0.552 **	9	0.765 **
		2	0.577 **	10	0.735 **
		3	0.709 **	11	0.583 **
Sec	cond:	4	0.672 **	12	0.763 **
Constraints facing the a	pplication of IRCs in KSA	5	0.638 **	13	0.605 **
		6	0.729 **	14	0.604 **
		7	0.642 **	15	0.671 **
		8	0.585 **	-	-

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Section	Sub-Section	Statement Number	Correlation Coefficient	Statement Number	Correlation Coefficient
		1	0.711 **	11	0.801 **
	_	2	0.729 **	12	0.744 **
	_	3	0.737 **	13	0.723 **
	_	4	0.785 **	14	0.692 **
Third: Proposed policies	to manage the application	5	0.739 **	15	0.785 **
	s in KSA	6	0.666 **	16	0.756 **
	<del>-</del>	7	0.702 **	17	0.636 **
	-	8	0.804 **	18	0.702 **
	<del>-</del>	9	0.800 **	19	0.713 **
	_	10	0.772 **	20	0.822 **

<sup>\*\*</sup> Function at 0.01 and below.

**Table 4.** Cronbach's alpha reliability coefficient for sections and their sub-sections of the research questionnaire.

Section	Sub-Sections	Number of Statements	Cronbach's Alpha
Castian 1. IDC's	Contributions to the environmental dimension of sustainability.	9	0.924
Section 1: IRC's contributions to	Contributions to the social dimension of sustainability.	12	0.930
sustainability	Contributions to the economic dimension of sustainability.	11	0.945
	Reliability factor for the section as a whole.	32	0.964
Section 2: Constraints	Constraints against the application of IRCs in KSA.	15	0.901
Section 3: Policies	3: Policies Proposed policies to promote the application of IRCs in KSA.		0.954
Overall reliability of the qu	67	0.966	

Source: By the authors.

In order to collect experts' opinions regarding the contributions, constraints, and policies of applying IRCs in KSA, the researchers measured the relative degrees of agreement individually using a five-degree Likert scale ranging from 1 to 5, with the following equivalents: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

The results were then analyzed and responses were displayed in the form of numbers and percentages to identify the degree of agreement to each statement. Calculation of the weighted mean helped rank the statements of each section in a descending order, based on the level of importance of contributions of IRCs to sustainable development, the level of agreement of experts on each of the challenges facing IRCs implementation, and the order of influence of different policies to manage and control IRCs projects in KSA. Whereas the standard deviations helped determine the extent to which the responses to each of the statements are skewed or dispersed.

# 3. Results and Discussion

#### 3.1. IRCs' Contributions to Sustainable Development

This section presents the findings of the field study and examines the experts' opinions on the extent to which they found IRCs contributing to sustainable development in KSA. Table 5 shows the order of IRCs contributions to the three dimensions of sustainability based on experts' levels of agreement. Experts strongly agreed that IRCs mostly contribute to economic sustainability with a mean score of (4.39) ranking the highest, then to social

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sustainability with a mean score of (4.25) and finally to environmental sustainability with a mean score of (4.06). The following is a detailed description of the findings on contributions of IRCs to the three dimensions of sustainable development.

<b>Table 5.</b> Ranking of the overall degree of IRO	Cs' contributions to sustainable development.

Dimensions of Sustainability	Mean	Standard Deviation	Ranking	Degree of Agreement
IRCs' contributions to the economic dimension of sustainability	4.39	0.556	1	Strongly agree
IRCs' contributions to the social dimension of sustainability	4.25	0.559	2	Strongly agree
IRCs' contributions to the environmental dimension of sustainability	4.06	0.707	3	Agree
The overall degree of the contributions of IRC to sustainable development in KSA	4.23	0.536	Strongly agree	

Source: By the authors.

#### 3.1.1. IRCs' Contributions to the Economic Dimension of Sustainability

As the results of the study show, the experts' sample find IRCs to be contributing mostly to the economic dimension of sustainability over the social and environmental dimensions. The contributions of IRCs to the economic dimension of sustainability are measured in the study through eleven detailed statements, shown in Table 6. The overall results show that most experts "strongly agreed" and "agree" with most of the statements with an overall standard deviation of (0.556), which indicates a low degree of variation in their opinions. Ordering according to the mean score, the highest-ranking contribution of IRCs to economic sustainability is "it is a tourist attraction with its various activities and facilities" with 97% of participants ("strongly agreed" and "agree") with a mean score (4.58). The second in ranking is "Provides direct job opportunities and reduces the problem of unemployment for young people", 92% of participants "strongly agree" and "agree" with a mean score (4.45). Followed by this is "brings new concepts in recreational activities with economic returns" with 91.3% of participants "strongly agreed" and "agree" with a mean score (4.41). While the least scoring aspects in experts' opinions were "Strengthens partnerships between recreational organizations with a reputation for providing recreational services" with 93.2% of participants ("strongly agreed" and "agree") and a mean score (4.34), and lastly "Contribute to the development of key economic sectors for the future" where only 87.5% of participants ("strongly agreed" and "agree") with the statement with a mean score (4.28).

These findings are consistent with Kovacs' [16] notion that the economic and financial well-being of recreation cities, whether city, territory, or state, is an important element of their contributions to sustainability, depending on the quality of services provided by the operators of these recreation cities. McCabe et al. [19] believes that recreation cities can succeed in the surrounding environment because of the social, environmental and economic benefits they offer to residents and visitors alike. They think that the financial and economic stability of recreation cities can be achieved through publicly funded entities that can meet difficult financial constraints at any time and provide Capital financing from the outset, without losing sight of financial planning because it is the surest way to align capital expenditure with continuing operational costs.

Prayaga [20] believes that the financial model used to create recreation cities must include mechanisms to take advantage of actual and moral values defined as the benefits of using resources either directly or indirectly. In the case of cities and recreational facilities, actual values can be linked to the use of facilities through recreation, tourism, education, health benefits, etc. Thus, in terms of direct use values, tourism brings the greatest benefits to recreation cities, which does not mean neglecting other lower-ranked sources of benefit. Furthermore, McCabe et al. [19] sees that there is a strong correlation between recreation cities and the positive impact on actual values of urbanization in peripheral areas, which

means that recreation cities and their services enhance the value of urbanization, create jobs and increase the quality of life within the region.

Table 6. Ranking of experts' opinion on the contributions of IRCs to economic sustainability.

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
It is a tourist attraction with its various activities and facilities.	4.58	0.577	1	Strongly agree
Provides direct job opportunities and reduces the problem of unemployment for young people.	4.45	0.671	2	Strongly agree
Brings new concepts in recreational activities with economic returns.	4.41	0.647	3	Strongly agree
Revives small economic enterprises in direct and indirect services.	4.41	0.666	4	Strongly agree
Provides attractive opportunities for foreign and Saudi investors.	4.41	0.703	5	Strongly agree
Contributes to stimulating economic growth and maximizes GDP.	4.39	0.700	6	Strongly agree
Gives the local, regional, and national economy high global competitiveness.	4.36	0.756	7	Strongly agree
Keeps national capital from leaking out of the Kingdom.	4.36	0.780	8	Strongly agree
Contributes to the diversification of national sources of income.	4.36	0.676	9	Strongly agree
Strengthens partnerships between recreational organizations with a reputation for providing recreational services.	4.34	0.623	10	Strongly agree
Contribute to the development of key economic sectors for the future.	4.28	0.778	11	Strongly agree
Overall result	4.39	0.556	S	trongly agree

Source: By the authors.

#### 3.1.2. IRCs' Contributions to Social Sustainability

IRCs contribution to the social dimension of sustainability is ranked second according to the experts' sample. Those contributions are measured in the study through twelve detailed statements, as shown in Table 7. The overall results show that the majority of the study sample "strongly agreed" and "agreed" with most of the statements with an overall standard deviation of (0.559) which indicates a low degree of variation in their opinions. According to the mean score, the highest-ranking contribution aspect of IRCs to social sustainability is "meets the needs of children and families for fun and useful games" with 96.2% of participants mostly "strongly agree" with it, and with a mean score (4.56). The second in ranking is "contributes to improving the quality of recreational services for citizens, residents, and visitors", 98.2% of participants mostly "strongly agree" to this statement, with a mean score (4.53). Followed by this is "achieving diversity in regional and national activities and recreation" with 96.9% of participants mainly "strongly agree" with a mean score (4.48). While the least scoring aspects in experts' opinions were "facilitates the adoption of new positive social concepts and behavior" with 76.3% agreement rate and a mean score (4.03), and lastly "preserves Arab-Islamic culture through educational recreational activities", where only 55.6% of participants mostly "agreed" with the statement with a mean score (3.62).

Table 7. Ranking of experts' opinions on the contributions of IRCs to social sustainability.

Statements	Mean Score	<b>Standard Deviation</b>	Ranking	Degree of Agreement
Meets the needs of children and families for fun and useful games.	4.56	0.590	1	Strongly agree
Contributes to improving the quality of recreational services for citizens, residents, and visitors.	4.53	0.537	2	Strongly agree
Achieving diversity in regional and national activities and recreation	4.48	0.582	3	Strongly agree
Contributes to the family's need for amenities, recreation, and entertainment.	4.45	0.622	4	Strongly agree
Provides more recreational options and opportunities for all segments of society	4.45	0.652	5	Strongly agree
Helps meet the needs of young people for recreational and cultural activities.	4.39	0.654	6	Strongly agree
Meets users' need for special recreational services.	4.35	0.675	7	Strongly agree
Contributes to the social health of members of society.	4.12	0.772	8	Agree
Keep pace with the development transformations and scientific and technical progress taking place in the world.	4.05	0.889	9	Agree
Contributes to strengthening family ties.	4.03	0.883	10	Agree
Facilitates the adoption of new positive social concepts and behaviors.	4.03	0.918	11	Agree
Preserves Arab-Islamic culture through educational recreational activities.	3.62	0.983	12	Agree
Overall result	4.25	0.559	S	trongly agree

Source: By the authors.

The results of the experts sample confirm the statement made by Parekh, [37] that self-recreation is important and achieves many social and psychological benefits to human beings, including contributing to balancing the physical, mental and spiritual requirements of the human being, to giving the individual skills, experiences and cognitive patterns, to developing their talents, and to increasing their ability to innovate. In addition, McCabe et al. [19] have a firm belief that recreation cities help promote a sense of inner peace, general satisfaction, and happiness; they provide a suitable life for individuals and ensure a healthy and viable environment for future generations. Li [18] (p. 1) believes that famous recreational parks promote the healthy lifestyle; hence, improving the quality of life of the visitors from all forms of communities and around the world. Saleh [21] considers recreation cities to have a diverse mix of community-rooted values. Godbey et al. [22] thinks that the establishment of recreational centers and cities has long been a reflection of the inherent need to develop a strategy that can meet the health and well-being needs of individuals.

#### 3.1.3. IRCs' Contributions to Environmental Sustainability

Although contributions of IRCs to the environmental dimension of sustainability are ranked third in experts' opinions, this does not diminish their valuable role. The environmental contributions of IRCs are measured in the study through nine detailed statements, as shown in Table 8. The overall results show that the study sample "agreed" with most of the statements and the overall standard deviation of (0.707) reflects the low

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degree of variation in the experts' opinions. According to the mean score, the highest-ranking contribution aspect of IRCs to environmental sustainability is "helps in redevelopment of uninhabited land" with 95% of participants mostly "strongly agreeing", and with a mean score (4.49). The second in ranking is "increase of the city's green areas", 85% of participants mostly "strongly agreed" to this statement, with a mean score (4.27). Followed by this is "achieving the world standard planning rates" with 88.2% of participants "agreeing" and "strongly agreeing" and mean score (4.26). While the least scoring aspects in experts' opinions were "enhances the city's ability to adapt to climate impacts" with 65% agreement, and lastly "purifies air and reduces pollution" where 64.7% of participants mostly "agreed" with the statement and both statements had a mean score (3.76).

Table 8. Ranking of experts' opinions on the contributions of IRCs to environmental sustainability.

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
Helps in the redevelopment of uninhabited land.	4.49	0.727	1	Strongly agree
Contributes to the increase of the city's green areas and vegetation.	4.27	0.845	2	Strongly agree
Contributes to achieving the world standard planning rates of IRCs needed by KSA.	4.26	0.781	3	Strongly agree
Preserves natural resources and achieves surrounding environmental balance	4.06	0.892	4	Agree
Combats desertification and reduces the problem of soil erosion.	4.04	0.938	5	Agree
Contributes to balanced environmental development at the regional and national level.	4.03	0.897	6	Agree
Contributes to water management and improves quality through the establishment of various drainage systems.	3.84	0.949	7	Agree
Enhances the city's ability to adapt to climate impacts.	3.76	0.961	8	Agree
Purifies air and reduces pollution.	3.76	1.051	9	Agree
Overall result	4.06	0.707		Agree

Source: By the authors.

#### 3.2. Constraints against the Implementation of IRCs in KSA

To identify the constraints facing the application of IRCs in KSA from the point of view of experts and officials, the researchers asked the respondents about fifteen statements as shown in Table 9. The overall results show that the study sample "agreed" with most of the statements with an overall standard deviation of (0.667) which indicates a low degree of variation in their opinions. The table arranges the constraints in descending order where the experts "strongly agreed" with one statement that is "Lack of local studies to apply IRCs". Most experts "agreed" to thirteen of the presented obstacles with scores ranging from (3.14 to 4.28), the first three of which were "Lack of work procedures and guidelines for the application of recreation cities", "Inadequate campaigns to promote the concept of IRCs", and "Poor infrastructure for the recreational sector considering the rental of developed land at prices similar to those developed for the industrial sector". Finally, the experts voted 'neutral' on one statement that is "The lack of large capital needed by such large projects".

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 $\textbf{Table 9.} \ \ \textbf{Ranking of experts' opinion on the constraints against implementation of IRCs in KSA.}$ 

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
Lack of local studies to apply IRCs	4.28	0.816	1	Strongly agree
Lack of work procedures and guidelines for the application of recreation cities	4.03	0.886	2	Agree
Inadequate campaigns to promote the concept of IRCs.	4.03	0.918	3	Agree
Poor infrastructure for the recreational sector considering the rental of developed land at prices similar to those developed for the industrial sector.	4.03	0.974	4	Agree
Lack of investment awareness towards the establishment of recreation cities.	3.98	1.021	5	Agree
Reliance on traditional energy sources and low use of renewable energy.	3.95	0.970	6	Agree
Lack of effective administrative oversight that ensures that cities comply with appropriate controls and mechanisms.	3.95	0.996	7	Agree
Lack of specific controls and legislation to establish IRCs.	3.91	0.987	8	Agree
Lack of supporting assistance services	3.88	1.048	9	Agree
Low efficiency of specialized workers in recreation cities, causing poor quality of recreational services.	3.84	1.051	10	Agree
Poor human and technical capabilities trained to operate the executive programs of recreation cities.	3.83	1.123	11	Agree
Lack of awareness of the importance of these IRCs and their environmental, social, and economic returns.	3.79	1.041	12	Agree

Table 9. Cont.

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
The lack of cultural awareness among the population of the importance of investing in recreation cities.	3.64	1.146	13	Agree
Fear of low demand for IRCs.	3.60	1.167	14	Agree
The lack of large capital needed by such large projects.	3.14	1.248	15	Neutral
Overall result	3.86	0.667	Agree	

Source: By the authors.

In the light of the constraints presented, Suárez et al. [38] indicate that the establishment of recreational areas for all segments of society is surrounded by significant constraints despite the known advantages of these areas in terms of the physical and psychological well-being of persons. Among these constraints is "environmental injustice" because recreational areas that distinguish between certain community groups such as children, the elderly, immigrants, and low-income families mean that the process of establishing these recreation cities may not have considered environmental justice. Another important issue facing the IRCs is managing visitor expectations in the midst of emerging social media that allows users to share instant user feedback, positioning new IRCs in competition with major well-established international recreation cities.

According to Woodcock [39] (p. 171) and Tsai et al. [40], recreation cities have faced the potential issue of a loss of confidence in the safe operation of their facilities. Because recreation cities have an uncountable number of attractions for family recreation, they ensure that visitors are given the opportunity to escape their usual lives into a fantasy world surrounded by illusion and suspense. When individual incidents occur, they do not adversely indicate poor risk management of these facilities, but, on the contrary, they send an ultimatum to the public that facilities are inherently hazardous; this may lead to a loss of confidence in the safety of the facilities.

#### 3.3. Proposed Policies to Manage the Application of IRCs in KSA

The researchers measured experts' opinions about the influence of twenty different policies to manage and control IRCs projects in KSA. Table 10 arranges those policies in a descending order according to experts' degree of agreement. The results indicate that all experts "strongly agreed" with all the proposed policies, with an overall mean value (4.55). The results also indicate that there is a homogeneity in the degree to which the experts approve the proposed policies to promote the application of IRCs in KSA, with a standard deviation (0.469).

Al-Rimmawi [41] sees that the recreation and theme park policies should cover not only sectors that benefit from them directly, such as tourism, etc., but should also contribute to enhancing the social, cultural and economic status of the society. The constraints of managing the recreation city are not only to plan and arrange its designated spaces, but must include and adopt a deliberate policy to manage urban spaces [42].

Hence, the need to adopt a local legal framework aimed at aligning recreation cities and their facilities with the International Goals for Sustainable Development. This means that the development of a recreation city will depend on the adoption of many current protocols and guidelines that create the ability to identify current and future threats. On the other hand, a proactive decision making approach must be adopted with regard to achieving the Sustainable Development Goals [43].

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**Table 10.** Ranking of experts' opinion of proposed policies to manage IRCs in KSA.

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
Observing safety and security standards when creating recreation cities	4.71	0.519	1	Strongly agree
Considering the aesthetic characteristics when applying recreation cities on the ground	4.69	0.516	2	Strongly agree
Introducing modern methods at all stages of the establishment of recreation cities	4.68	0.544	3	Strongly agree
Providing basic services such as emergency treatment health centers	4.66	0.571	4	Strongly agree
Providing a study of road and street networks and their relationships with different land uses within recreation cities and their contacts with the rest of the region beyond their borders.	4.64	0.544	5	Strongly agree
Passing laws and legislation that stimulate the establishment of recreation cities	4.62	0.643	6	Strongly agree
Strengthening private sector confidence and removing obstacles to its strong participation in the project	4.61	0.605	7	Strongly agree
Coordination between relevant departments in the preparation of recreation city projects to ensure sustainable development (urban planning, environment, agriculture, economy, recreation, tourism).	4.61	0.654	8	Strongly agree
Taking advantage of the topography of the land and maintaining the nature of the public site.	4.60	0.574	9	Strongly agree
Providing standard local planning standards for IRCs.	4.57	0.610	10	Strongly agree
Considering adequate measures that reduce risk (e.g., firefighting systems, earthquake resistance, etc.)	4.54	0.652	11	Strongly agree
Activating the role of various government funds in establishing and developing recreation cities	4.52	0.682	12	Strongly agree
Considering the preservation of the environment and the valuation of environmental regulations.	4.51	0.673	13	Strongly agree
Activating the role of the media to promote the importance of implementing IRCs.	4.48	0.663	14	Strongly agree
Raising compliance with environmental standards for reducing environmental degradation from all sectors involved in the city's construction.	4.48	0.644	15	Strongly agree

Table 10. Cont.

Statements	Mean Score	Standard Deviation	Ranking	Degree of Agreement
Encouraging investors from inside and outside the Kingdom and activating the principle of public-private partnership (PPP) to create recreation cities	4.48	0.752	16	Strongly agree
Adapting to natural aspects such as soil type, vegetation type, water resources, weather, and climate before the establishment of recreation cities.	4.44	0.622	17	Strongly agree
Balancing the distribution of green areas in recreation cities.	4.44	0.733	18	Strongly agree
Providing government support for the establishment of IRCs.	4.38	0.791	19	Strongly agree
Commitment to national initiatives in the face of the constraints of implementing IRCs	4.31	0.744	20	Strongly agree
Overall result	4.55	0.469	Strongly Agree	

Source: By the authors.

According to Le-Blanc [44], "Sustainable development includes a set of policies aimed at balancing economic progress with environmental protection, while taking into account the need to consider the many differences that still exist between industrialized and developing countries." Biedenweg et al. [17] suggest that the establishment of recreation landscapes should rely on flexible strategies that meet the needs and the benefits of individuals and societies, especially children, the elderly, and people with disabilities.

Leal-Filho et al. [34] consider that the organizational vision of recreational activities will ensure that the characteristics of sustainable development are addressed as described by the United Nations. This is achieved through the integration of urban development goals that ensure sustainable growth, not only from an economic perspective, but also in terms of the environmental, political, social, and cultural benefits currently targeted.

An important recreational development policy of any country is to encourage local regulators to support entrepreneurs who view tourists and recreation enthusiasts as a potential opportunity for good business sources; having a pioneering sense, they see the potential associated with recreation cities in general [45]. For tourism-based projects and recreation cities, urban growth provides huge commercial opportunities for both public and private sectors [46]. As for KSA, it should not be a condition that entrepreneurs are exclusive to the private sector only. Rather, the door should be open for public institutions that are involved in development processes. For governmental institutions working on various strategies such as the Greater Riyadh Urban Development Strategy (MEDSTAR) the establishment of IRCs can provide an opportunity to analyze the world's largest existing recreation cities so that they can benchmark them to provide the ideal protocol for KSA [47].

Poelman [48] suggests that any recreational land use, such as gardens, zoos, parks, and castle parks, seeking to provide spaces that can accommodate various environmental and recreational services aimed at improving health, well-being and quality of life, should include policies and indicators that determine the size or how those spaces are provided. Hollar et al. [31] consider that achieving health benefits as an aim from the start may be an effective means of integrating the main objectives of IRCs enhancing health-related qualities at the community level.

Once recreation cities are established, they will not only serve the interests of people, they will also provide a protected environment in which wildlife thrives while allowing visits to outdoor recreation enthusiasts and wildlife explorers [49].

Hollar et al. [31] suggest that adopting multilateral approaches to the development of recreation projects by involving key actors will achieve the highest competitive advantages of the society. Arvanitidis and Papagiannitsis [50] view that recreation theme parks provide an opportunity for public and private sector participation to determine the final resources spent by ordinary people on the program. In times of resources scarcity, public institutions are taking measures to save them, leading to general neglect of public places. The opportunity to identify public institutions begins with the introduction of the recreation park policy, improving the likelihood of sustainable development of high-potential recreation park to adhere to the quality of internationally recognized services.

Widmar et al. [51] believe that the creation of a social networking platform can be an important factor in the development of recreation cities as it provides a means of obtaining information that no one has yet requested and is not controlled by citizens on how they understand the quality of service at the facility. Therefore, an important focus of recreation cities should be on policies that stem from visitor experiences and safety [52]. Risk assessment and safety management are, therefore, an important part of the changes that need to be addressed from the outset in order to plan, design and implement components of a recreation city [39]. Supporting the social and cultural diversity of visitors is significant, hence, the quality and culture of tourists visiting recreation cities may differ from what is customary in KSA [53].

#### 4. Conclusions

It is clear from the study that the idea of developing IRCs in KSA is accepted by all experts and participating officials. They believe that the IRC proposed in the vicinity of Dammam Metropolitan Area DMA has many contributions to sustainable development, but also faces many constraints, and that for its application to succeed, certain policies and measures must be adopted. The results of this research may be summarized as follows:

- **IRCs contribute to the economic dimension of sustainability**: Experts and officials stressed that the IRC stimulates economic growth, maximizes GDP, represents a tourist attraction with its various activities and facilities, as well as maintains national capital within KSA, provides attractive opportunities for foreign investors, as well as provides job opportunities.
- IRCs contribute to the social dimension of sustainability: Experts and officials
  agreed that IRCs contribute to improving the quality of recreational services for
  citizens, residents, and visitors, achieve diversity in activities as they meet the needs of
  various users, and facilitate the adoption of new positive social concepts and behaviors
  desired in the Saudi society.
- IRCs contribute to the environmental dimension of sustainability: Experts and
  officials confirmed that the IRCs help in the redevelopment of uninhabited land,
  increase greenery and vegetation in urban areas, enhance the city's ability to adapt
  to climate impacts, and achieve balanced environmental development at the regional
  and national level.
- IRCs are faced with constraints such as lack of local studies analyzing the experiences of existing IRCs and drawing lessons from them, lack of procedures and guidelines, poor specialized human and technical capabilities trained to run complex operational programs for advanced recreation cities, inadequate campaigns to promote the concept of IRCs, fear of possible low demand of IRCs due to cultural and community considerations, limitations of the enough capital needed for such large projects, lack of awareness of the importance of IRCs and their environmental, social, and economic returns, lack of cultural awareness among the population of the importance of investing in recreation cities, and lack of specific controls, policies and legislation for the establishment and management of IRCs.
- IRCs need to adopt some policies to effectuate their application, including: passing
  laws and legislation to stimulate the establishment of IRCs, providing government
  support for the establishment of IRCs, activating the role of various government funds

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in establishing and developing them, providing local planning standards, activating media channels to promote the importance of their application, strengthening private sector confidence, removing obstacles against citizen participation, coordinating relevant sectors in preparing IRCs' projects to ensure sustainable development (urban planning, environment, agriculture, economy, recreation, tourism, etc.), adhering to national initiatives in the face of application constraints, introducing appropriate modern methods at all stages of construction, considering environmental conservation and the value of environmental regulations/observing safety and safety standards at construction, considering adequate measures that reduce the magnitude of risks, considering aesthetic values when building IRCs, adapting to natural aspects and balancing their distribution in recreation cities, and studying road and street networks and their relationships with different land uses within recreation cities and their contacts with the rest of the region beyond their borders.

IRCs are considered to have recreational facilities that promote a better quality of life and environment for their residents and visitors. To ensure that these recreational facilities reach global standards, KSA needs to adopt innovative planning, design, and management and appropriate planning laws and regulations that suit and support sustainable development. Successful planning and design of IRCs are based on rational simulation of ideal environmental, social, or economic models centered on human beings. Measures and standards of safety and comfort for visitors will preserve the reputation of new recreation cities and increase the demand for them.

It is apparent from this research that the contributions of IRCs to sustainable development will be positively reflected in society, being a very promising tool to actively engage Saudi citizens and public and private institutions to achieve the goals of the Kingdom's Vision 2030 in building a vibrant society, a prosperous economy, and an ambitious homeland.

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