مستقبل السياحة الخضراء في الشرق الأوسط: دراسة حالة لمدينة نيوم (المملكة العربية السعودية)

د.خالد بن سالم العطوي

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ملخص الدراسة:

هدفت هذه الدراسة إلى دراسة جدوى مدينة نيوم في تحقيق السياحة الخضراء، من خلال التدقيق في الجهود والاستراتيجيات المستخدمة لتحقيق السياحة الخضرا. استخدمت الدراسة استراتيجية البحث النوعي لاكتساب معرفة غنية ومتعمقة من مختلف الأشخاص ذوي المعرفة. تم مقابلة عشرين مشاركًا من الأشخاص الذين يعملون في مشروع نيوم، منهم المهندسون والعاملون، ومديرو قطاعات السياحة، ممن لديهم معرفة جيده بالمشروع. كشفت النتائج أن المملكة العربية السعودية قد طورت رؤية شاملة لعام 2030، تدمج الاستدامة في قطاعات السياحة لتحقيق صفر انبعاثات بحلول عام 2030. تتبنى الدولة تدريجيًا السياحة المستدامة، بما في ذلك إحداث تأثير منخفض على الثقافة المحلية والبيئة مع توفير فرص العمل. مثال نشر مبادرات أكثر اخضرارًا، مثل: شركات الطيران الخضراء والضيافة البيئية والمواد ذات المصادر المحلية والإجراءات الحكومية، ذات التفكير المستقبلي لتعزيز السياحة المستدامة، ومع ذلك يؤدي العدد الكبير من الزوار إلى الإفراط في السياحة، والإفراط في استخدام الموارد الطبيعية، مما يؤدي في النهاية إلى استنفاد نفس الشيء، إلى جانب ذلك تساهم السياحة الزائدة في التلوث وانبعاثات الدفيئة وندرة المياه. تتكون مدينة نيوم من خطة طموحة تتماشى مع رؤية السعودية 2030 التي بدأت بالفعل في الظهور، مع التركيز على بناء مدينة ذكية.

الكلمات المفتاحية: مدينة نيوم، الاستدامة، السياحة الخضراء، رؤية 2030، المدينة الذكية.

The Future of Green Tourism in the Middle East: A Case Study of NEOM City (Saudi Arabia)

Dr. Khald S Alatawy
Marketing Department, Faculty of Business Administration,
University of Tabuk

Abstract:

As Saudi Arabia's NEOM City puts together a comprehensive plan for a smart, sustainable city, the major question is how viable it is to construct a state-of-the-art city that can achieve excellent sustainability and green credentials. This study aimed to examine the viability of NEOM City in achieving green tourism by scrutinizing the efforts and strategies used to realize green tourism. The paper employed a qualitative research strategy to gain rich and in-depth knowledge from various people with informed knowledge. Purposive sampling was employed to select the ideal members from the population to take part in the research. Twenty participants were recruited from contractors developing the NEOM project, engineers, workers, environmentalists, and managers of the tourism sectors with sufficient knowledge about the project. Semi-structured interviews were conducted via Skype to obtain the views of the respondents. Raw data was analyzed through thematic analysis. However, findings revealed that Saudi Arabia had developed an extensive vision for 2030, incorporating sustainability into its tourism sectors to achieve zero emissions by 2030. The country is gradually embracing sustainable tourism, including making a low impact on the local culture and the environment while generating job opportunities and income and conserving the local ecosystems. It deploys greener initiatives like green airlines, eco hospitality, locally sourced materials, and forward-thinking government actions to foster sustainable tourism. However, the high number of visitors results in over-tourism and overuse of natural resources, ultimately depleting the same. Besides, over-tourism contributes to pollution, greenhouse emissions, and water scarcity. NEOM city consists of an ambitious plan in line with Saudi's vision 2030 that has already started to materialize, focusing on building a smart city. The city harnesses smart technologies to achieve sustainability and an ideal tourist destination. The knowledge presented in this study is vital to environmentalists, policymakers, practitioners, and scholars who need to understand the project and its approaches to sustainability.

keywords: NEOM City, Sustainability, green tourism, vision 2030, smart city.

1.0 INTRODUCTION

1.1 Background

Tourism is a considerable contributor to Greenhouse Gas (GHG) emissions, attributable to emissions emerging from transport, tourist buildings and facilities, food, and accommodation, among other activities (Fava, 2020). In 2005, tourism contributed to about 5% of global GHG emissions (Simpson et al., 2008). In 2020, the sector generated 8% of the entire carbon dioxide emissions, and the quantity of these emissions is steadily growing by 4% each year (Fava, 2020). Furqan et al. (2010) note that for the tourism sector to respond to climate change rapidly, it needs to deploy sustainable and green practices. Green tourism can be described as an environmentally friendly tourist. The concept is increasingly appealing to tourism enterprises and operators due to the rising pressure from various quarters, such as the government and international organizations, to improve environmental performance by deploying effective and tangible sustainable management approaches (Boiko, 2020). Thus, many players in the tourism sector are concerned and are putting forwards various recommendations to realize green tourism products to mitigate the negative impacts caused by the sector on the environment (Hassan et al., 2020). Green tourism is emerging as a sustainable development concept for economies that can afford the associated financial commitments. According to Yousaf et al. (2021), sustainable development is a complex task for developing countries lacking financial resources to mitigate environment-related challenges. Sustainable development requires the implementation of new business models for various economic sectors for the achievement of sustainability. Green tourism is a concept that comes when countries have been struggling with deteriorating environments. For countries looking to protect their culture in the wake of modernity, green tourism would be a step towards the right direction. Furqan et al. (2010) noted that green tourism would be highly attractive to tourism enterprises, especially with the growing pressure from governmental and international entities to embrace environment friendly management techniques. International bodies such as the United Nations have developed standards and conditions to ensure compliance and the achievement of environmental goals.

1.2 Overview of green tourism and NEOM city

One of the cities that intends to embrace green tourism involves Saudi's Neom City. NEOM city has come up with an extensive futuristic plan for achieving an eco-city as Saudi Arabia attempts to go green (Boretti & Castelletto, 2022). The plan entails a car-free and carbon-free city built over 100 miles. Accordingly, the city is considered a blueprint for a greener future where humanity progresses without compromising the planet's well-being. This is a $500 billion project considered part of Saudi Arabia's Vision 2030 to mitigate the climatic impacts evident in the oil-rich country. Covering about 10,230 square miles, Neom will exist wholly outside the confines of the Saudi judicial system and will be governed by an independent legal system drafted by investors (Farag, 2019). The mega territory will encompass a 170km long city known as The Line that will run straight through the desert. Like the Barcelonan superblocks, every square will comprise self-sufficient amenities like schools and shops. Besides, The Line will comprise hyper-speed trains to facilitate transport. Furthermore, Neom will contain an Oxagon, including a city floating on the water of about 4.3 miles, making it the biggest floating structure globally. On the Red Sea coast, Neom plans to undertake the biggest coral reef restoration project to be completed by 2025 (Boretti & Castelletto, 2022). Moreover, Neom has set out a plan to become the most self-sufficient food city through vertical farming coupled with greenhouses to revolutionize the Saudi Kingdom, which currently has at least 75 percent of its food (Alam et al., 2021). The city's mission is to become tomorrow's stewards by repairing the climate, replenishing nature resources, and saving species (Alam et al., 2021). NEOM is considered an accelerator of planetary regeneration, where nature comes first. Comprising a deep Blue Ocean, pristine beaches, and outstanding epic mountains in deserts, NEOM incorporates ancient geography and topologies that have not been seen anywhere in the world (Farag, 2019). Such rich tapestry of the natural world represents valuable tourism attractions that NEOM City intends to protect, preserve and elevate. Accordingly, 95 percent of the land and sea will be preserved for nature, enabling residents, wildlife, and tourists to benefit from the regreening and rewilding sustainable model (Alam et al., 2021). The city embraces

enhanced livability to improve the lives of people.

Furthermore, native animals and plants will live cohesively in the sea and land without threats from desertification and human activities. NEOM City is part of the Crown Prince's vision for a greener Saudi Kingdom (Hassan et al., 2020). Prior to the COP26 climate change negotiations, the Prince launched Saudi's Green Initiative intending to realize net zero emissions in the country by 2060 (Salameh et al., 2021). Such efforts are considered a major step forward among climate change advocates. According to scientists, to mitigate global warming to 1.5°C, worldwide oil production needs to reduce by about 5% annually between now and 2030 (Boretti & Castelletto, 2022). Nonetheless, the Saudi Kingdom has continued to increase oil production after making pledges during the COP26 climate conference.

The planet is experiencing an era of overheating, and the major cause is human activities that lead to the overexploitation of natural resources. If this trend is not arrested, it will cause permanent damage to the global biodiversity and ecosystems, which might result in extinction. Tourism is closely connected to the environment and climate and hence is a vulnerable and increasingly climate-sensitive sector, just like the energy, transport, and agriculture sectors. As Saudi Arabia's NEOM City puts together a comprehensive plan for a smart, sustainable city, the major question is how viable it is to construct a state-of-the-art city that can achieve excellent sustainability and green credentials. Critics have continued to accuse the Saudi leadership, the key driving force behind NEOM City of greenwashing, of making outstanding environmental promises to distract people from reality (Alam et al., 2021). Greenwashing entails marketing goods or services to be more sustainable than they are, which causes people to be disillusioned and skeptical, derailing the evolution of a sustainable project. This Giga project is integral to the Crown Prince's vision for a greener Saudi Kingdom (Salameh et al., 2021). The project's supporters indicate that it is important for Saudi to start afresh by building a smart and sustainable city powered by solar and wind energy sources while water originates from carbon-free desalination processes.

Therefore, it is vital to examine the viability of NEOM City in achieving green tourism by examining the efforts and strategies used to realize green tourism. The objectives set for this study are.

1. Examine Saudi Arabia's vision 2030 and sustainable tourism.
2. Scrutinize NEOM City's plan to understand its viability as a green and sustainable city.
3. Determine efforts undertaken to realize green tourism in NEOM City.

2.0 LITERATURE REVIEW

2.1 Saudi Arabia Vision 2030

Saudi Vision 2030 encompasses a strategic framework of minimizing the country's dependence on oil by diversifying its economy and developing public service sectors like tourism, health, recreation, education, and infrastructure (Nurunnabi, 2017). the main objectives of Vision 2030 involve reinforcing economic and investment, promoting a softer and more secular image, and enhancing non-oil international trade. Its three pillars include making the country the heart of the Arab and Islamic world, transforming Saudi's location into a hub linking Afro-Eurasia, and becoming a worldwide powerhouse of investment (Aboalshamat, 2020). Furthermore, Saudi focuses on its people and the Islamic faith. It has made several commitments, such as establishing an Islamic museum, increasing the number of Umrah visitors from 8 to 30 million, promoting the growth of entertainment and cultural opportunities, and increasing the number of heritage sites registered by UNESCO and others (Amran et al., 2020).

2.2 Tourism in Saudi Arabia

Saudi is considered the second largest tourist destination in the Middle East, with more than 16 million yearly visitors (Johnson, 2010). Whereas most tourism activities largely entail religious

pilgrimages, the country has been experiencing growth in leisure tourism. The Saudi Kingdom considers tourism a bridge for cultural communications between its population and the larger world. The sector generates investment opportunities for foreign and local investors and is one of the fastest-growing industries in the world (Mufeed & Gulzar, 2014). Attributable to the importance of tourism in the Saudi Kingdom, the government and other players are carefully boosting it, and in 2019, it generated $25 billion (Mansour & Mumuni, 2019). In 2018, tourism and travel accounted for 9% of the total economy of Saudi worth $62.2 billion (Mansour & Mumuni, 2019). Since 2019, the country began issuing tourist visas to 49 nations at $80, and visas can be obtained via the online eVisa platform or on arrival (Abuhjeeleh, 2019). Several tourist attractions exist in Saudi Arabia, such as Red Sea diving, Hijaz, and Sarawat Mountains, among other ancient ruins. In Riyadh, the tourist attractions include Masmak Palace, Al Faisaliah Tower, Kingdom Tower, the National Museum, Riyadh Front, and Diriyah Gate. In Jeddah, the major attractions include King Fahd's Fountain, Jeddah Waterfront, the Floating Mosque, and Mersal Village. Other Saudi tourist attraction sites are Grand Mosque, Okaz City, Al-Soudah Mountain, Umluj, and others (Mufeed & Gulzar, 2014).

Table 1: visitors per year during the last 10 years

Year	Number of tourists	Receipts bn $	% of GNP	Receipts per tourist
2019	20.29 m	19.85	2.5 %	978 $
2018	17.57 m	16.97	2.1 %	966 $
2017	18.61 m	15.02	2.2 %	807 $
2016	20.89 m	13.44	2.1 %	643 $
2015	21.83 m	11.18	1.7 %	512 $

Sources: Development and importance of tourism for Saudi Arabia. (n.d.). Worlddata.info. https://www.worlddata.info/asia/saudi-arabia/tourism.php

2.3 Sustainable and Green Tourism

Tourism is a self-sustaining, development-oriented, and employment-generating sector with a significant effect on any economy. Tourism growth can improve the economy and offer employment opportunities. In the Middle East, more than 1.2 million tourists visit the Red Sea each year and generating over 275,000 jobs

for the locals. Nonetheless, it can negatively affect the environment, habitat, inhabitants, and cultural heritage when not effectively managed (Mandal & Hasbani, 2022). According to Nature Climate Change, tourism generates about 8% of global carbon emissions (Lenzen et al., 2018). The sector pressures natural and local resources, including produce, water, and energy. Also, it affects residents and animal habitats as well as life. The coral reefs in the Red Sea have been declining rapidly over decades, especially in tourism regions. Other detrimental impacts of tourism include water pollution, overfishing, and loss of marine life (Mandal & Hasbani, 2022). Therefore, sustainable or green tourism seems to be the answer to such paradox to maximize the benefits created by the industry while minimizing its detrimental effects on the social and natural environment. Wei et al. (2022) defined green tourism as the tendency by people to be more drawn to nature and yielding positive experiences while maintaining the environmental protection and ecological balance. Green tourism could also be referred to as sustainable tourism. The United Nations (n.d.) outlined the definition by the World Tourism Organization that sustainable tourism involves taking full responsibility for current social, environmental and economic outcomes while meeting the communities', industry and community needs. In UN WTO strategic document 1999 Art. 3, tourism is referred to as a factor of sustainable development (Olszewski-Strzyżowski 2022).

To harness opportunities for green tourism, the key players (entertainment parks, hotels, and food and beverage outlets) in the tourism sector should be committed to building sustainable tourism. There is significant progress towards sustainable tourism in the Middle East as tourism and hospitality landscaper advances rapidly, especially as the sector looks forward to the Arabian Travel Market (ATM) in 2023 (Curtis, 2022). Some of the emerging trends in the region include green airlines, locally sourced products, eco hospitality, forward-thinking government actions, and sustainable attractions. In line with Net Zero emissions, the ATM calls for public and private sectors throughout the UAE and the world to explore ways of decarbonizing tourism and travel (Ozturk et al., 2021).

2.4 Green Tourism in Saudi Arabia

Green tourism denotes the environment-friendly tourism activities. This term stands for small scale tourism advocating tourism activities while reducing its impact on the environment. According to Nowacki et al. (2023), green tourism is a fast growing trend whose viability depends on the public's understanding of the social and demographic characteristics propelling the travel behavior. Fahmawee and Jawabreh (2023) noted that green tourism involves tourism adhering to environmental sustainability. Green/sustainable tourism considers the social, economic, and environmental consequences in the present and future (Prihayati & Veriasa 2021). Green tourism positively impacts the implementing region, translating to direct and indirect benefits. According to Yousaf et al. 2021), green and sustainable tourism incentives could encourage holistic operations, further encouraging sustainable developmental activities. Sustainable tourism has been in existence for a long time. Satta et al. (2019) stated that sustainable tourism emerged from 1990s, and has from then dominated tourism while guiding its planning and management. The article highlighted the broad definition of sustainable tourism as provided by the United Nations Environment programme (UNEP). According to UNEP, tourism meets the environment and visitor's needs while considering the social, economic and environmental impacts of its activities.

Saudi vision 2030 intends to put more effort into and undertake more investments in the tourism sector. Particularly, the country aims to align the tourism sector with vision 2030 by raising the sector's contributions to its GDP to over 10% (Abuhjeeleh, 2019). Also, Saudi aspires that the tourism sector offers at least one million more jobs and attracts 100 million visits per annum by 2030 (Waheed et al., 2023). Recently, the country launched the Tourism Development Fund to foster investments in Saudi and open new opportunities for cooperation with other investors to support tourism initiatives. The Fund offers various financial solutions, including supporting the private sector by offering investment loans and investing in the project (Hassan et al., 2020). Also, the Fund supports distinguished and promising projects by delivering the right solutions to ensure that the projects are implemented to completion.

The Saudi Kingdom has launched several ecotourism initiatives to foster sustainable travel. Various Giga projects have been started which contribute to sustainable tourism. One of the initiatives involves the Red Sea Project spanning the archipelago of 90 islands within the coast of the Saudi Kingdom (Alshammaa, 2019). Launched in 2017, the project aims to attract visitors to unspoiled islands while preserving the ecosystem of the Red Sea coast. The project's goal is to create about 70,000 jobs for the locals while utilizing 100% renewable energy and 100% carbon neutrality, a ban on plastic usage, and encouraging zero waste landfills (Khan et al., 2021). Another initiative involves the Green Riyadh, focused on increasing the city's green spaces to 28 square miles to reduce temperatures, foster healthy lifestyles, and improve the air quality of residents and visitors (Alshammaa, 2019). Green Riyadh entails efforts of planting 7.5 million trees throughout the capital city (Waheed et al., 2023). Subsequently, we examine the NEOM project, which is the focus of this study.

2.5 NEOM as the future of green tourism in the Saudi tourism sector

To achieve Saudi Vision 2030, the country has launched various projects and initiatives. Among the projects that have been put forward involves NEOM City, which was announced in 2017 (Aly, 2019). The first phase will be completed by 2025. Roughly translated to mean new future, the NEOM project focuses on the Tabuk region and encompasses the creation of smart towns, tourism entertainment spots, and cities (Salameh et al., 2021). The project aims to introduce an entirely novel model of urban sustainability through initiatives like pioneering solar technology (Alotaibi et al., 2019). Also, the region will host the world's biggest green hydrogen project, estimated to eliminate 3 million tons of carbon dioxide per annum. While unveiling the plan, the Prince indicated that the 170-kilometer coastal strip will be free from cars and streets, and the city will be powered using clean energy (Aly, 2019).

The Line that will be constructed in NEOM will house nine million people living in interconnected cities using artificial intelligence. The futuristic city will prioritize walkability,

technology, and clean energy to confront traffic, infrastructural and pollution challenges that affect urban life. $500 billion has been set aside for this project to develop smart cities, enterprise areas, sports and entertainment arenas, ports, and tourist centers (Boretti, 2022). Furthermore, the NEOM plan integrates a network of international airports. Using desalination technology will result in 100% carbon neutrality and foster sustainability (Madakam & Bhawsar, 2020). Also, the project will include high-speed transit for people traveling a long distance to make areas within NEOM city accessible in 20 minutes. The city will conserve over 95% of the natural environment surrounding it demonstrating the relationship between humans and the natural environment (Alotaibi et al., 2019).

Whereas this ambitious project will enhance sustainability in Saudi Arabia, there is little attention in the literature on how the project affects tourism, especially green tourism. Furthermore, a study undertaken by Algumzi (2022) found that NEOM comprises several environmental risks and some design features seem unfeasible. For instance, while it is appealing to install renewable energy in an empty desert, like solar energy, developing an artificial moon to light up the sky during the night will increase sea trade in the Red Sea (Goda et al., 2019) and illuminate beach sands using artificial chemicals coupled with using cloud seeding technology to facilitate artificial rain and developing ports will have considerable environmental impacts. Whereas the city will depend on 100% of clean energy, the plants that produce clean energy will also have significant environmental effects (Boretti, 2022). Furthermore, financial and funding risks and political, legal, operational, human resource, and technological risks are associated with the project (Algumzi, 2022). These aspects are not well comprehended, and it is important to seek knowledge from experts to unveil how the NEOM project will tackle these issues and ensure green tourism.

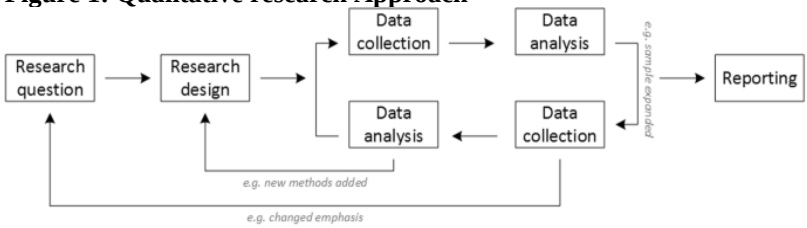
3.0 METHODOLOGY

3.1 Research Strategy

The present study utilized a qualitative research strategy. Jamshed (2014) defines qualitative research as exploring the nature of phenomena, including their various manifestations, the settings

within which they appear, and people's perceptions while excluding range, frequencies, and other numerical aspects (Busetto et al., 2020). Qualitative research is a less structured approach to gaining rich and in-depth knowledge of people's reasoning and motives. The end objective is to develop a deep knowledge of a topic, a problem, or an issue. Punch (2013) defines qualitative data as any information collected to describe but not to predict. The major benefits of qualitative research involve flexibility, responsivity, and openness to the context; hence sampling, data gathering, and analysis are usually related in a cyclical manner rather than deploying a stepwise approach (Busetto et al., 2020). As shown in figure 1, qualitative research encompasses various back-and-forth steps between data gathering and analysis whereby novel insights result in the adaption and expansion of the original plan.

Figure 1: Qualitative research Approach



Source: Busetto et al., (2020)

The qualitative research process ends when data saturation is achieved (when no more information can be found). Furthermore, qualitative research is exploratory and provides a chance to obtain detailed information concerning an issue or topic.

3.2 Sampling and Study Sample

Sampling in research intends to acquire an adequate sample representative of the target population of interest. According to Ponto (2015), gathering data from the targeted population is increasingly unrealistic. Hence, a subset of the whole population called a sample is utilized to approximate the responses from the targeted population. Whereas probabilistic sampling used in quantitative studies aims to estimate the frequencies of characteristics of units within a population, non-probabilistic sampling tries to represent the diversity of the phenomenon being explored (Etikan et al., 2016). This might be realized using a large

random sample, but such an approach is inefficient. Therefore, it is more efficient and logical to purposively select a diverse sample to cover all relevant varieties of the phenomenon to achieve saturation. Purposive sampling was employed as a form of non-probabilistic sampling where the researcher depends on his judgment to select the ideal population members to participate in the research. Purposive sampling requires that the researcher has prior knowledge concerning the purpose of the study to select the most appropriate and eligible participants (Ponto, 2015). Since the study intended to examine green tourism in Saudi Arabia, specifically on the NEOM Project, the researcher was compelled to recruit participants who understand the NEOM project and how it will impact green tourism or sustainability. The participants were recruited from contractors developing the NEOM project, engineers, workers, environmentalists, and managers of the tourism sectors with sufficient knowledge about the project. In total, 20 participants who speak English and have in-depth knowledge about the NEOM project were selected.

3.3 Data Collection

In qualitative research, various approaches can be employed in data collection: focus groups, document analysis, semi-structured interviews, and observations (Biggerstaff & Thompson, 2008). Document analysis entails reviewing written materials like archives, diaries, annual reports, or policy documents (Russell & Gregory, 2003). Observations are used to gain insights about specific settings and behavior than reported views or opinions (Ciesielska et al., 2018). Meanwhile, focus groups are interviews that explore the experience and expert opinions of the participants in a group of between five and ten members. Focus groups employ moderators to offer guidance on the topic of discussion (Finch et al., 2003). The present study deployed semi-structured interviews. According to Taylor (2005), semi-structured interviews involve exchanges with informal characters or conversations with specific intentions. Interviews are deployed to obtain knowledge and insights concerning people's views, motivations, values, or experiences (Jamshed, 2014). Interviews can be differentiated based on the extent to which they are structured (questionnaires), semi-structured

or open (open conversations) (Punch, 2013). Semi-structured interviews comprise open-ended questions and deploy interview guides or a list of questions that define topics, sub-questions, or areas of interest (Taylor, 2005). The pre-defined questions in the interview guide were derived from the study objectives, and the literature analyzed. In contrast to a questionnaire and other methods of data collection, semi-structured interviews are beneficial since they are interactive, allowing the researcher to observe verbal and non-verbal cues (McIntosh & Morse, 2015). Also, they allow new knowledge to emerge, which was not anticipated. Furthermore, the researcher can probe the interviewee further to clarify or seek additional information where applicable. The interviews were conducted via an online Skype tool to enhance interactivity. Each interview session lasted between 15 and 25 minutes. The interviews were audio recorded for further analysis and interpretation. Throughout the study, research ethics were observed through informed consent, respecting the participants' privacy and confidentiality, ensuring anonymity, and not exposing the subjects to any mental or physical risk.

4.0 DATA ANALYSIS AND FINDINGS

The present study employed thematic analysis to analyze and interpret the findings. First, the raw data collected were transcribed verbatim in preparation for analysis. The researcher subsequently reviewed and explored the transcribed data to determine any emerging patterns or repeated ideas based on the views provided by the interviewees. Based on the initial ideas, a set of codes was established that are relevant to categorize the data. Subsequently, codes were assigned to the data by examining the participants' responses and tagging them with code. The codes were merged to form themes cohesively to reflect the study's objectives. The section presents the findings based on the study's objectives. The interviewees were asked questions relating to the sustainability efforts in Saudi Arabia in the tourism sector, the plan of NEOM City, and how the city intends to realize green tourism. Therefore, the results are organized around these themes.

4.1 Saudi Arabia's sustainability efforts in the tourism sector

As many countries announce their plans to reach zero emissions levels by 2030, Saudi Arabia also has a well-thought-out and comprehensive plan to reach this goal. One of the interviewees, who was an environmentalist, indicated that: Our country is on the right path towards achieving sustainability, especially the tourism sector. We are working closely with various government agencies to implement strategies that preserve the climate and wildlife. We are seeing many initiatives such as Saudi Green Initiative Forum happening in our country that investigate strategies that our tourism sector can use to foster sustainability. These contributions relate to the theoretical aspects of sustainable tourism. Mustafa et al. (2021) highlighted the relevance of the stakeholder theory in sustainable tourism. The article highlighted the theory's suitability in tourism research for the identification of stakeholders while enabling collaboration in tourism planning and development.

Saudi Arabia is gradually embracing sustainable tourism to make a low impact on the local culture and the environment while generating income and employment opportunities and conserving the local ecosystems. Another environmentalist indicated that: In the last one decade, our country has been serious in pursuing sustainable tourism as it tries to balance the economic, social, and environmental objectives. We are trying to mitigate threats caused by unmanaged human activities as we maximize the long-term economic growth of our country. The tourism sector is mapping important ecological sites in an attempt to protect human heritage and also biodiversity.Another interviewee who is a worker in the Ministry of Tourism believes that the country is on the right path and has integrated the UN sustainable goals in tourism to tackle climate change and built a resilient tourism sector. We are working collaboratively with UN agencies of sustainability and have put sustainable tourism at the heart of our operations. Our pillars of realizing green tourism include using environmentally friendly approaches such as recycling, and reusing materials, reducing overuse of scarce natural resources, and preserving natural heritage and culture.

Another respondent listed some of the activities and initiatives that Saudi is doing to foster green tourism: The tourism sector is currently restoring historic sites and saving endangered species such as in the Red Sea. We have said no to plastic, especially bottles that cannot be reused and can easily end up in the water and endanger aquatic life. Therefore, visitors are usually advised that they should not damp items that harm our ecosystem. Nonetheless, one respondent felt that Saudi Arabia is not doing enough to realize greener tourism due to reliance on oil power and other unsustainable practices. there are more flights to Saudi by visitors, and they use significant fuel leading to more carbon emissions. Also, over-tourism is another major challenge, especially during pilgrimages that contribute to pollution, and traffic congestion.

4.2 NEOM Plan

The investigators asked the respondents to explain the general plans of NEOM City, including its objectives and intentions for the Saudi Kingdom. First, the respondents described NEOM City as general. One of the project managers argued that: NEOM is a smart city being developed in Tabuk Province in the Saudi Kingdom. From my understanding, the planned city is integrating smart technologies to make it an ideal and sustainable tourist destination in our country.

A contractor in NEOM City indicated that: NEOM emerged from Saudi's 2030 sustainable plan of reducing our country's reliance on oil. The city plans to use smart technologies in homes and businesses and ensure a sustainable city that runs on renewable energy, including solar and wind power. Another interviewee working on the NEOM project claimed that: NEOM embodies a new future for Saudi Arabia as a whole where innovative business practices will be used to improve livability and sustainability. The city is determined to reinvent conservation as articulated by Saudi's vision 2030.

While presenting his opinions about the project, a respondent outlined the main components of the NEOM project: NEOM City is a project comprising three regions, Oxagon, the Line, and Trojena. The line will include a straight-line city that will house over nine million people with the necessary services within a walking distance.

The Trojena is an outdoor skiing destination located on the highest mountain in the Saudi Kingdom, including the Sarawat Mountains. Oxagon will concentrate on modern manufacturing.

4.3 The plan of NEOM to achieve green tourism

NEOM is considered one of the most ambitious sustainable tourism projects of modern times. The respondents shared various views concerning how the city plans to achieve green tourism in Saudi Arabia. A project manager indicated that: We are building NEOM City in an ancient land using leading technologies to ensure seamless tourist travels. We intend to nurture unutilized land and coastal waters to achieve regenerative tourism.

NEOM exploits various approaches to realize greener tourism. An interviewee from the ministry of tourism noted that: NEOM is based on revolutionary and futuristic urban designs. The project works to minimize pollution to zero levels by eliminating traffic. We plan to use renewable energy and conserve the environment. It will offer an exceptional tourist destination which will attract world travelers to come a see how things should be done. Another respondent noted that: NEOM will enable visitors to see the once-lost animals roaming in the hills. Workers are already growing massive coral gardens to support green initiatives. We are developing greener architecture hotels and accommodation facilities with little use of oil energy. Residents will benefit from improved indoor and outdoor worthwhile experiences. We are trying to use sustainable building materials to achieve greener lighting and outstanding air quality.

5.0 DISCUSSION

Notwithstanding the origin or background, the world population has a moral obligation to one another, the future generation, and other species that sustain the plant. The present choices and human activities have considerable long-term effects. The major pillars of sustainability include social development, environmental protection, and economic development. Informed by the UN's Sustainability Goals, many countries have developed plans to improve the quality of life, preserve natural resources, and safeguard the ecosystem system (Madakam & Bhawsar, 2020). Saudi Arabia's vision for 2030

involves minimizing reliance on oil and diversifying economic development (Nurunnabi, 2017). The findings clearly show that the country has incorporated sustainability into its tourism sectors, intending to achieve zero emissions by 2030.

Respondents believe that the Saudi Kingdom is on the right path in realizing its sustainability agenda in the tourism sector since it has implemented various initiatives that preserve the environment. The country is gradually embracing sustainable tourism, including making a low impact on the local culture and the environment while generating job opportunities and income and conserving the local ecosystems. Particularly, in the last decade, the country has been pursuing sustainable tourism in its attempt to balance environmental, economic, and social objectives. It has mapped vital ecological sites that need to be protected and works collaboratively with UN agencies to accomplish greener tourism. Ozturk et al. (2021) have shared similar views, arguing that Saudi has been experiencing greener initiatives like green airlines, eco hospitality, locally sourced materials, and forward-thinking government actions to foster sustainable tourism. However, the high number of visitors leads to over-tourism and the overuse of natural resources. The two aspects ultimately lead to resource depletion. Besides, over-tourism contributes to pollution, greenhouse emissions, and water scarcity. A study conducted by Lenzen et al. (2018) asserted that the tourism sector produces 8% of the global carbon emissions and puts pressure on local and natural resources such as water and energy as well as results in water pollution, overfishing, and loss of marine life (Mandal & Hasbani, 2022). Therefore, the Saudi economy should attempt to minimize over-tourism to protect its environment. Further, the study explored the general plans of NEOM City and its aims. Accordingly, NEOM is an ambitious plan in line with Saudi's vision 2030 that has already started to materialize, focusing on building a smart city in Tabuk Province. The city is harnessing smart technologies to achieve sustainability and an ideal tourist destination. According to Khan et al. (2021), the city plans to confront traffic, infrastructural and pollution challenges that affect urban life by prioritizing walkability, technology, and clean energy.

NEOM incorporates various initiatives intended to accomplish greener tourism. By building a city on ancient land, the project aims to nurture unexploited land and coastal waters to achieve regenerative tourism. Besides, NEOM exploits revolutionary and sustainable architectural designs, renewable energy, and sustainable materials to offer greener tourist experiences. In the future, NEOM will house nine million residents who will benefit from the improved outdoor and indoor experience. However, Algumzi (2022) noted that NEOM faces several environmental risks making it unfeasible to accomplish a 100% green city. For instance, even though it is desirable to install renewable energy in an empty desert, like solar energy, developing an artificial moon to light up the sky during the night will increase sea trade in the Red Sea (Goda et al., 2019) and illuminate beach sands using artificial chemicals coupled with using cloud seeding technology to facilitate artificial rain and developing ports will have considerable environmental impacts. Besides, the project faces operational, technological, and political risks that might affect its completion.

5.1 Contributions and Implications of the study

Tourism plays significant roles among humans, including exploring various parts of the world, meeting new people, and experiencing various activities and traditions. The industry has been blamed for contributing to global warming and climate change. This study supports sustainable tourism by unearthing recent projects being undertaken across the world, specifically Saudi Arabia's NEOM project. The knowledge presents in this study is vital to environmentalists, policymakers, practitioners, and scholars who need to understand the project and its approaches to sustainability. Policymakers worldwide can utilize the knowledge to undertake similar projects to foster sustainable tourism across the globe to minimize global warming and unhealthy practices associated with unsustainable tourism. Furthermore, the information can be used to make sound decisions about whether the NEOM project will realize greener tourism. The study outlines points of concern that might lead to the project's failure. The Saudi government can use the knowledge to perform corrective measures to achieve 100% sustainability.

This study contributes to academic literature through the

exploration of green tourism from the perspective of Neom city. The responses from participants with a direct interaction to Neom city highlighted the shortfalls and strengths attributed to sustainable tourism. The study provides a starting point by highlighting a case study that other scholars could build up on in furthering research efforts. The study portrayed Saudi Arabia as a country that has made substantial advancements in sustainable tourism. However, oil reliance further complicates thriving sustainability efforts. Therefore, further research efforts should explore sustainable options oil-based economies could explore in ensuring sustainable development.

6.0 CONCLUSION

The science behind global warming and climate change is well-established in the literature. With the warming globe, the magnitude and regularity of extreme and dangerous weather events seem to be escalating from wildfires, droughts, hurricanes, and storms. Therefore, climate actions and sustainable practices are increasingly crucial to preserve the environment and offer potential solutions to climatic change. Particularly, the tourism sector contributes immensely to climate change, and there is an urgent need for sustainable tourism focusing on protecting the environment, wildlife, and natural resources. Additionally, the socio-economic benefits of local communities living in tourist destinations, conservation of cultural heritage, and authentic experience are integral parts of green tourism. Informed by the significance of green tourism, the present study examined the ability of NEOM City's ambitious plan to realize green tourism in Saudi Arabia and how this aligns with the country's vision 2030 agenda. Saudi Arabia's development vision 2030 intends to minimize the overreliance on oil, preserve natural resources, and protect the ecosystem. In line with this vision, the country has implemented various initiatives in tourism to foster sustainable development by making a local impact on the environment and the local culture, as well as generating jobs and revenues from the sector to improve the living standards of its people. This aligns with the three pillars of sustainability, including the environmental, social, and economic goals. Some of the visible

sustainable development initiatives in the tourism sector include green airlines, eco hospitality, locally sourced materials, and forward-thinking government actions to foster sustainable tourism. Additionally, the study scrutinized the role of the NEOM City project in boosting greener tourism. Harnessing smart city technologies, NEOM city intends to confront challenges affecting modern cities, including pollution, traffic, and others, while prioritizing clean energy, sustainable materials, green architectural designs, and walkability. However, the project might face significant challenges, such as political, social, technological, and environmental challenges, that might impede it from achieving a 100% green city.

6.1 Directions for future research

While NEOM City aims to realize a green tourist destination, various challenges are likely to hinder a 100% sustainable and smart city. In the future, it is vital to extensively analyze the factor affecting the realization of NEOM's greener city. Such a study should collect qualitative and quantitative data to measure and quantify the extent to which each factor affects sustainability and in-depth data to explain the causal relationship. Sustainability and tourism development are the two variables that should form the backbone of continued research efforts in the future. The two variables are bound to encounter transition as time goes by. The current definition of the two could be different in years to come, substantially affecting tourism. Therefore, the changing concepts of sustainability and tourism development would need to be determined to unearth the overall impact on tourism.

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