



Applying Regenerative Tourism to Enhance Sustainable Tourism Development in Hurghada

Asmaa Abdul Rauf khalf^a
Marwa Said Wahba^c,

, Mohamed Mohamed Khorshed^b,

^a Assistant professor, Tourism Studies Department, Faculty of Tourism and Hotels, Minia University

^b A researcher, Tourism Studies Department, Faculty of Tourism and Hotels, Minia University

^c Assistant professor, Tourism Studies Department, Faculty of Tourism and Hotels, Fayoum University

Keywords

Hurghada,
Regenerative tourism,
Sustainable tourism
development

Abstract

Regenerative tourism is concerned with improving the tourist destination to be better after the visit, so it is the joint responsibility of the tourists and stakeholders to make this happen.

A set of criteria has been formulated to measure the extent of the application of regenerative tourism in Hurghada based on the literature review analysis and taking into account Hurghada's natural and man-made ingredients. This research intends also to identify its benefits and the challenges that may hinder it. This research used the descriptive-analytical approach, where interviews were conducted with managers of tour operators and diving center managers in Hurghada, and a questionnaire was prepared and distributed to 110 employees of the Egyptian Environmental Affairs Agency (EEAA) in the Red Sea Governorate. The data were analyzed using descriptive statistics, Pearson correlation analysis, and regression analysis in SPSS 22.0. These analyses assured that there are factors that help apply regenerative tourism in Hurghada, such as the resorts and beaches diversity, and cooperation between government institutions and stakeholders in development. The research resulted in a strong positive relationship between the ingredients for implementing regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada.

This research recommends that regenerative tourism should be applied to preserve Hurghada and coastal destinations in Egypt to enhance sustainable tourism development.

1. Introduction

Regenerative tourism heals the wounds of exclusion by fusing native and foreign knowledge systems, enabling locals to be self-sustaining (Pollock, 2020). Without the ethical awareness of native and alternative knowledge, tourism will lead to sustaining colonial practices (Bellato, 2023).

Regenerative tourism seeks to create positive change for local communities and the environment at the host destinations by supporting local economies, protecting cultural heritage, and valuing the natural environment (Zaman, 2023). It's leaving the place better than we found it (Glusac, 2020). It can be said that regenerative tourism not only fixes tourism problems but also aims for holistic solutions to social problems.

Regenerative tourism heals the wounds of exclusion by fusing native and foreign knowledge systems, enabling locals to be self-sustaining (Pollock, 2020). Without the ethical awareness of native and alternative knowledge, tourism will lead to sustaining colonial practices (Bellato, 2023).

Regenerative tourism seeks to create positive change for local communities and the environment at the host destinations by supporting local economies, protecting cultural heritage, and valuing the natural environment (Zaman, 2023). It's leaving the place better than we found it (Glusac, 2020). It can be said that regenerative tourism not only fixes tourism problems but also aims for holistic solutions to social problems.

Research problem

The research problem is that, even with the abundance of tourism attractions in Hurghada, traditional tourism which takes advantage of the city's resources without considering social, environmental, or equitable issues remains unabated, particularly in light of the city's recent pollution problems that harmed biodiversity and destroyed coral reefs. This made it necessary to implement regenerative tourism, which is now a crucial component of development system in order to achieve sustainable development, given the paucity of research on the subject of localized regenerative tourist applications.

Research questions

1. For what extent can regenerative tourism be applied in Hurghada?
2. What are the criteria used for applying regenerative tourism in Hurghada?
3. What are the ingredients for implementing regenerative tourism in Hurghada?
4. What are the benefits of implementing regenerative tourism in Hurghada?
5. What are the challenges of implementing regenerative tourism in Hurghada?

Research aims & objectives

The main aim of the research is to apply regenerative tourism in Hurghada to enhance sustainable tourism development. It was split into several objectives, including

- 1- Creating fundamental benchmarks whose evaluation will guarantee figuring out whether Hurghada can adopt regenerative tourism.
- 2- determining the components whose existence will facilitate Hurghada adoption of regenerative tourism.

- 3- Identify the primary expected advantages that Hurghada will benefit from the implementation of regenerative tourism.
- 4- Define the main potential challenges that could hinder the implementation of regenerative tourism in Hurghada.

2. Literature Review

2.1 Regenerative tourism concept

It's necessary to transform the present model of mass tourism filled with economic leakages and environmental harms to a regenerative and culturally model supporting domestic regenerative tourism that affirms on original experiences, supported by stakeholders, which consider the environment as a priority and reciprocate between locals and visitors (Oliver, 2021).

The concept of regenerative tourism has gained significant attention in recent years. The announcement of pandemic COVID-19 at the beginning of the year 2020 forced countries to close their boundaries, find solutions to social immobility, and the recession of economic activities, including tourism (Alrashed et al., 2020). Tourism has been recognized as one of the most impacted sectors, and it is predicted to be the last activity to continue its efficiency (Sigala, 2020). That provided an opportunity to stop and rethink post-COVID-19 and reconsider impacts of unsustainable tourism forms (Cave & Dredge, 2020; Pollock, 2019).

The Cambridge dictionary defines regeneration as “the act of something growing or being grown again.” So, regenerative travel is travel that helps the environment grow or grow again. Instead of only leaving a lighter footprint, we use this footprint to improve that area so it can regenerate and grow stronger in the future (Royds, 2021).

A UNESCO organized debate in 2020 explained how we can use this downturn to improve new alternative models for tourism recovery such as regenerative tourism that boost communities, (UNESCO, 2020). It's "tourism that provides opportunity for combined learning and meaningful interchange" (Matunga et al., 2020, p. 298). It's also “using tourism not as a goal but as a means for creating a better environment for guests, inhabitants, and businesses” (Hartman & Papp, 2021, p. 3).

2.2 Regenerative tourism criteria

A set of criteria has been developed in accordance with the UN-determined principles of regenerative tourism (CBI, 2022), including:

2.2.1 Cooperation between the concerned agencies and tourism installations

Cooperation between government, business, nonprofits, and community groups is essential to prevent competition that may harm economic systems (CBI, 2022). Stakeholder engagement is one of the human rights, as mentioned in Article 11 of the Treaty on European Union, as required to ensure that the actions are exact and fair (European Union, 2012).

2.2.2 Inclusive and equitable

By involving the local suppliers (CBI, 2022). The International Trade Centre (ITC) set up the Inclusive Tourist Programme to aid small producer communities in developing countries to gain access to international tourism markets that helped

improve livelihoods in agriculture, hospitality services, crafts, and managing environmental impact (ITC, 2010).

2.2.3 Place respect

By implementing regenerative hospitality practices, guests are provided with life-changing experiences that highlight the features of the place (Regenerative Travel, 2020). Such as showing cultural heritage, folklore, gastronomy, local landmarks, and wildlife responsibility (CBI, 2022).

2.2.4 Environmental responsibility

It includes managing biodiversity and natural resources and safeguarding species (CBI, 2022). The unsustainable use of resources results from:

- 1) The loss of economic resources.
- 2) The demise of marine and terrestrial species of animals and plants.
- 3) The loss of sites of historical, cultural, and archaeological value.
- 4) Noise pollution
- 5) Air contamination (ECCCZ., 1998).
- 6) Oil pollution (Carpenter, 2019).

2.2.5 Cultural stewardship

Regenerative tourism has the potential to yield cultural benefits, including the acknowledgment of indigenous peoples, the promotion of tolerance via travel, the investment in the arts and culture, learn about various cultures via travel (Anderson & Westcott, 2020).

2.3 Strategies towards regenerative tourism

There are diverse ideas on achieving regenerative tourism, including:

2.3.1 A key change in perspective: We need to essentially change our perspective on the world before regenerating it (Axinte et al., 2019).

2.3.2 Place-based approaches: Regenerative principles are applicable anywhere, but Pollock indicated that a place-based strategy is essential for regenerative tourism, as the application of these principles differs depending on a variety of social, cultural, and environmental factors of the destination (Pollock, 2019).

2.3.3 Cooperation and co-creation: Regenerative tourism needs collaboration, involving governments, tourism providers, local authorities, destination management operators, host communities, and tourists themselves (Pollock, 2019).

2.3.4 Iterative approaches: Gibbons recommended using an iterative strategy due to the present gaps in knowledge and lack of instruments to measure advancements in regenerative tourism (Gibbons, 2020).

2.3.5 Diverse economies framework: Reconditioning, prolonging product life, and minimizing waste are key concepts based on natural systems and designed to protect the environment (Manniche, et al., 2018).

2.4 Hurghada city

The city of Hurghada is the capital of the Red Sea Governorate. It's a popular scuba-diving destination. The estimated population of Hurghada on January 1, 2023, was about 210,689 people (Red Sea Gov., 2022).

2.4.1 Attractions of Hurghada

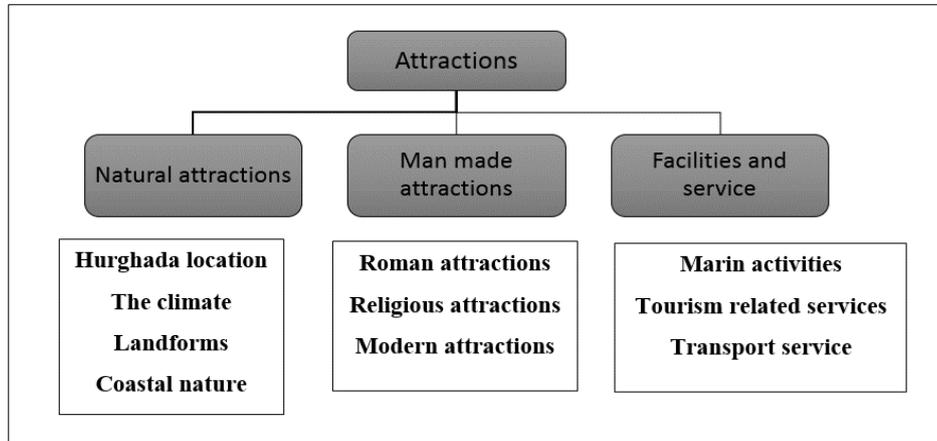


Figure (5) Attractions in Hurghada

By the researcher it shows the components of attraction of Hurghada

2.4.1.1 Natural attractions

- **Hurghada location**

Hurghada is located on a coastal plain range from 8 to 35 km on the western coast Red Sea, 450 km south-east of Cairo. It stretches for about 36 Km along the seashore. Hurghada is bordered by Ras Gareb in the north, Safaga in the south, the Red Sea coast in the east, and Sohag and Assyut governorates in the west (Red Sea Gov., 2022). It is located between latitudes 26:27 north and longitudes 32:34 east. (Abd AlShaheed, 2021).

- **The climate**

Hurghada has a desert climate, with warm winters and hot summers. Air temperatures range from 18 to 35 °C. The waves reach 2 m in height in winter, and may rise more during the marine waves (Red Sea Gov., 2022).

- **Topography**

There are many valleys and mountain ranges with a picturesque geological structure. The valleys are an important resource for water and as transportation routes. They represent an important factor in city planning. They have wild plants and animals, and they are suitable for safari tourism (Red Sea Gov., 2022).

- **Coastal nature**

Hurghada comprises numerous protected islands, including Giftun, Umm Qamar, Magawish, Abu Ramada, Abu Minqar, Fanadir, and Shadwan. Coral reefs are a biodiverse ecosystem where colorful fish live alongside plants, coastal mangroves, and seaweeds (Red Sea Gov.,2022).

2.4.1.2 Man-made attractions

- **Roman attractions:** The Roman port in Jabal Abu Shaara.

- **Religious attractions:**

- 1- Abdel Moneim Riyad Mosque.
- 2- Anba Shenouda Church

- **Modern attractions**

- 1- Hurghada Museum
- 2- Grand Aquarium (Red Sea Gov.,2022).

2.4.1.3 Facilities and services

There are also services that support tourist activity in Hurghada, such as:

1- Marin activities

Table (1) Water activities in Hurghada

Activity	Number
Diving centers	65
Safari boats	98
Water sports centers	80
Underwater photography companies	12

Source: [Egypt Chamber of Diving and Watersports (CDWS, 2023)]

Data analysis: There are 65 diving centers in Hurghada, Marine safaris are organized by 98 safari boats, there are 80 aqua centers present watersports activities, there are also 12 underwater photography companies present their services in Hurghada.

2- Tourism related services

Table (2) Tourist related services in Hurghada

Services	Number
Tour operators	136
Marinas and scaffolds	71
Restaurants	78
Cafes	130
Bazaars	1300

Source [Egyptian Cabinet Information and Decision Support Center (IDSC, 2021)]

Data analysis: There are 136 tour operators in Hurghada, 71 Marinas and scaffolds for mooring boats, 78 defer restaurants ,130 cafes and 1300 bazar for selling gifts and souvenirs.

3- Transport service

- 1) Hurghada airport

It's located 5 km southwest of Hurghada center. It's an international airport with a capacity of 7.5 million passengers (Civil Aviation Min., 2023).

- 2) Hurghada port

It supports tourism activity, according to the following statistics:

- 1- There are 451 passenger ships on average per year (RSPA, 2022)
- 2- The average number of the cruise vessels is 675 vessels/year.
- 3- The average number of the tourism yachts is 210 yacht/year.
- 4- The average number of tourists is 50.000 tourist/year (MTS, 2022).

2.4.2 The current position of Hurghada

Table (3) The total hotel capacity in Hurghada

	2020	2021	2022
Number of hotels	145	143	143
Number of rooms	42056	45010	45010
Number of beds	79538	84637	84637

The source of the statement: (Tourism Department in the governorate's general office, 2020-2021-2022)

Data analysis: There are 136 tour operators in Hurghada, 71 Marinas and scaffolds for mooring boats, 78 defer restaurants, 130 cafes and 1300 bazar for selling gifts and souvenirs.

Table (4) Tourists number & nights

	2020	2021	2022
Tourist nights	6087542	11438944	19736740
Tourists number	760943	1429869	2467093

The source of the statement: (Tourism Department in the governorate's general office, 2020-2021-2022)

Data analysis: In (2020) the number of tourists was 760,943 tourists, and the number of tourist nights was 6,087,542 nights, and in (2021) the number of tourists became 1,429,869 tourists, and the number of tourist nights was 11,438,944 nights, then in (2022) the number of tourists became 2467,093 tourists, and the number of tourist nights was 19,736,740 nights. The average stay is about 8 days.

3. Methodology

The researchers used the descriptive-analytical approach. The importance of the research returns to the application of regenerative tourism as a means to achieve sustainable development that helps protect the natural attractions and encourages tourists to enjoy and preserve the environmental resources to protect them for now and future generations, since it is the most appropriate approach to describe the phenomenon in question. In this approach, the researchers are trying to describe the subject of the study, analyze the data, and compare, explain, and assess, hoping to reach meaningful generalizations to increase and enrich knowledge on the subject.

3.1 Collecting data

Data were collected through questionnaires that were prepared in a manner appropriate to the situation to reduce incorrect answers. They were distributed both in printed form and disseminated online via Google Drive, available at:

(https://docs.google.com/forms/d/e/1FAIpQLSdF-AWgL9tEnLB2h-5PIYQZwjK23nHz4Imq4HWzR1yEdo8vPg/viewform?usp=sf_link).

The questionnaire was available from August 2023 to September 2023. It has been answered by 110 participants.

The Stephen Thompson equation was used to calculate the sample size for a population of known numbers, as:

N is the number of members of the community.

P the probability value, if not known, can be used as 0.05.

d the error rate is usually 0.05.

Z 1.96 The standard score is with a confidence level of 95.

$$n = \frac{N \times p(1-p)}{\left[N-1 \times \left(d^2 \div z^2 \right) + p(1-p) \right]}$$

The interviews questions were prepared and was a mixture of closed and open-ended questions, and were conducted to:

- 10 managers of tour operators in Hurghada.
- 10 managers of diving centers in Hurghada.

3.2 Measures

The research aims to apply regenerative tourism to Hurghada. So, descriptive analytical methodology is used by using a 6-section questionnaire tool depending on a set of criteria derived from the principles of regenerative tourism set by the United Nations in formulating the questionnaire. The first section focused on gathering demographic characteristics of the respondents, such as gender, educational level, and years of experience. The second section shows the basics of applying regenerative tourism in Hurghada. The third section examines the ingredients for implementing regenerative tourism in Hurghada. The fourth section identifies the challenges of implementing regenerative tourism in Hurghada. The fifth section sets the benefits of implementing regenerative tourism in Hurghada. The sixth section is an open question about the respondents' suggestions for applying regenerative tourism in Hurghada. The questionnaire items from section 2 to section 5 were anchored according to the Five-Point Likert Scale: "1 = strongly disagree", "2 = disagree", "3 = neutral", "4 = agree", and "5 = strongly agree".

3.3 Data Validity and Reliability

3.3.1 Data Validity

To validate the data collection instrument used in this study in terms of its readability, format, and ability to measure the study's constructs, the researchers distributed the questionnaire instrument to the employees of the Egyptian Environmental Affairs Agency (EEAA) in the Red Sea Governorate and with those who have specializations and expertise in the field of this study. The questionnaire instrument was then updated and refined to reflect the comments and suggestions received by the domain experts. Moreover, the experts showed interest and interacted with the researchers concerning the questionnaire instrument, which adds to its validity.

3.3.2 Data Reliability

Before proceeding with further analysis, reliability testing was conducted in order to ensure consistent measurement across various items in the questionnaire. Indeed, the reliability of a measure indicates the stability and consistency of the instrument. Consequently, this method determines reliability by examining the internal consistency of the research instrument, such as the questions (items) in the questionnaire, which are normally presented. Cronbach's alpha is one of the most frequently applied metrics to measure a scale's reliability, and its index ranges from 0.0 to 1.0. The researchers should target a value closer to 1.0, as the alpha value proves that the instrument of the study is strong and consistent. However, it's

important to note that in the social sciences, the threshold value of 0.7 is considered acceptable.

Table (5) Cronbach’s Alpha value

Variables	No. of items	Cronbach’s Alpha Value	Validity Coefficient*
The basics of applying regenerative tourism in Hurghada.	18	0.943	0.971
• Cooperation between relevant agencies and tourism establishments.	3	0.749	0.865
• Inclusivity and justice.	3	0.754	0.868
• Respecting the place.	5	0.945	0.972
• Environmental responsibility.	7	0.906	0.952
The ingredients for implementing regenerative tourism in Hurghada.	9	0.924	0.961
• Dependence on alternative economies.	4	0.872	0.934
• Nature of Hurghada City.	5	0.898	0.948
The benefits of implementing regenerative tourism in Hurghada.	6	0.967	0.983
The challenges of implementing regenerative tourism in Hurghada.	5	0.894	0.946
Total	38	0.973	0.986

* Validity coefficient = /Reliability coefficient

In order to measure the internal consistency and reliability of the study’s constructs. Cronbach’s alpha (α) measure was used. The scales’ reliabilities were measured and the Cronbach’s Alpha of all scales in Table (14) ranged from 0.967 to 0.894, and for total questionnaire items was (0.973), this indicate an acceptable Cronbach’s Alpha value for each field, whenever Cronbach’s Alpha value is acceptable if it's more than (0.7).

3.4 Data Analysis

The researchers depended on using The Statistical Package for Social Sciences (SPSS) was used to process data statistically. The treatment included the statistical methods. such as Cronbach's Alpha Test to calculate the stability coefficients of the questionnaire, and the coefficient of stability of each axis of the study axes. Percentage and frequency to explain the characteristics of the study population of the functional variables, and to determine the responses of its members towards the study axes, Means, and standard deviation (SD), Pearson correlation, and Regression analysis.

4. Results

The following part explains the results of analyzing the five dimensions of applying regenerative tourism in Hurghada.

4.1 Descriptive analysis

In this section, the researchers relied on the descriptive analysis to get the means and the standard deviations for the study constructs and their items. The items were measured using a Likert-type scale as follows:

4.1.1 Section One: Demographic Characteristics of Respondents

- a) In a brief demographic profile of age of respondents. The age bracket of 41 to 50 had the greatest number of respondents (39.3%), followed by the age bracket of 31 to 40 years old (28.6%).
- b) In analyzing the level of education, the most representative degree is a bachelor's degree, with 66.10% of the respondents, while 21.40% of the respondents had a PHD degree.
- c) The years of experience in the study sample that the majority (66.10%) of the sample spent around more than 15 years, while 17.90% of respondents spent around 11 to 15 years.

4.1.2 Second Section: The basics of applying regenerative tourism in Hurghada

Table (6): Cooperation between relevant agencies and tourism establishments

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
The Environmental Affairs Agency coordinates with various government institutions to support sustainable tourism development in Hurghada.	0	3.6	3.6	16.1	76.8	4.66	0.717	1	Strongly Agree
Local residents are involved in planning sustainable tourism development in Hurghada.	7.1	16.1	35.7	33.9	7.1	3.18	1.024	3	Neutral
There is ongoing cooperation between Hurghada stakeholders (hotels, diving centers, restaurants, and bazaars) to determine how to develop and plan.	0	3.6	8.9	17.9	69.6	4.54	0.805	2	Strongly Agree
Total Mean						4.13			Agree

Table (6) presents the means and standard deviations of the basics of applying regenerative tourism in Hurghada, like cooperation between relevant agencies and tourism establishments, where the means ranged between 4.66 and 3.18 compared with the total instrument mean for the domain (4.13). The item "The Environmental Affairs Agency coordinates with various government institutions to support sustainable tourism development in Hurghada" ranked first with a mean and standard deviation (mean = 4.66, standard deviation = 0.717) compared with the total instrument mean and standard deviation. The item "Local residents are involved in planning sustainable tourism development in Hurghada" ranked last and reached a mean of (3.18) and a standard deviation of (1.024) compared with the mean and standard deviation of the total instrument.

Table (7): Inclusivity and justice

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
The local community benefits from tourism revenues in Hurghada.	1.8	1.8	19.6	50	26.8	3.98	0.838	2	Agree
The infrastructure in Hurghada is strong.	0	5.4	19.6	48.2	26.8	3.96	0.827	3	Agree
There is great interest in local and simple industries in Hurghada.	3.6	3.6	14.3	42.9	35.7	4.04	0.986	1	Agree
Total Mean		3.99				Agree			

The table clarifies the basics of applying regenerative tourism in Hurghada, such as inclusivity and justice, and the most common items are "There is great interest in local and simple industries in Hurghada," "The local community benefits from tourism revenues in Hurghada," and "The infrastructure in Hurghada is strong," with a mean of 4.04, 3.98, and 3.96, respectively.

Table (8): Respecting the place

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
The Environmental Affairs Agency is concerned with protecting marine life in Hurghada.	0	1.8	5.4	21.4	71.4	4.62	0.673	2	Strongly Agree
The Environmental Affairs Agency maintains the beaches in Hurghada.	0	3.6	3.6	17.9	75	4.64	0.721	1	Strongly Agree
There is oversight by the agency of marine fishing operations in Hurghada.	0	0	14.3	30.4	55.4	4.41	0.730	3	Strongly Agree
The agency follows up on the maintenance of boats in Hurghada.	0	1.8	16.1	39.3	42.9	4.23	0.782	5	Strongly Agree
The agency imposes oversight on maritime activities.	0	0	10.7	39.3	50	4.39	0.676	4	Strongly Agree
Total Mean						4.46			Strongly Agree

The table shows the basics of applying regenerative tourism in Hurghada, such as respecting the place, and the most common items are "The Environmental Affairs Agency maintains the beaches in Hurghada," "The Environmental Affairs Agency is concerned with protecting marine life in Hurghada," and "There is oversight by the agency of marine fishing operations in Hurghada," with a mean of 4.64, 4.62, and 4.41, respectively.

Table (9): Environmental responsibility

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
Oil pollution is handled in safe ways.	0	0	19.6	51.8	28.6	4.09	0.692	4	Agree
Solid waste is disposed of in safe ways.	0	3.6	19.6	53.6	23.2	3.96	0.758	6	Agree
Transportation in Hurghada takes into account the environmental aspect.	1.8	5.4	21.4	33.9	37.5	4.00	0.986	5	Agree
The afforestation of Hurghada streets is expanding to reduce CO2.	3.6	1.8	17.9	32.1	44.6	4.12	1.006	3	Agree
There are enough waiting areas.	0	7.1	14.3	19.6	58.9	4.30	0.966	2	Strongly Agree
Hurghada transport routes are good and paved.	0	3.6	12.5	17.9	66.1	4.46	0.848	1	Strongly Agree
Periodic maintenance of historical and heritage areas in Hurghada is carried out.	0	5.4	25	41.1	28.6	3.93	0.867	7	Agree
Total Mean						4.12			Agree

The table presents the means and standard deviations of the basics of applying regenerative tourism in Hurghada, like environmental responsibility, where the means ranged between 4.46 and 3.93 compared with the total instrument mean for the domain (4.12). The item "Hurghada transport routes are good and paved" ranked first with a mean and standard deviation (mean = 4.46, standard deviation = 0.848) compared with the total instrument mean and standard deviation. The item "Periodic maintenance of historical and heritage areas in Hurghada is carried out" ranked last and reached a mean of (3.93) and a standard deviation of (0.867) compared with the mean and standard deviation of the total instrument.

4.1.3. Third Section: What are the ingredients for implementing regenerative tourism in Hurghada?

Table (10): Dependence on alternative economies

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
Renewable energy sources, such as solar energy and wind energy, are used in Hurghada.	0	3.6	8.9	17.9	69.6	4.54	0.805	1	Strongly Agree
Hurghada wastewater is distilled and purified for reuse.	0	3.6	14.3	53.6	28.6	4.07	0.756	3	Agree

Waste is collected in a way that helps reuse and recycling in Hurghada.	0	1.8	17.9	53.6	26.8	4.05	0.721	4	Agree
Tourist establishments in Hurghada seek to obtain environmental certificates.	0	7.1	3.6	41.1	48.2	4.30	0.847	2	Strongly Agree
Total Mean						4.24			Strongly Agree

The table shows the ingredients for implementing regenerative tourism in Hurghada, such as dependence on alternative economies, and the most common items are "Renewable energy sources, such as solar energy and wind energy, are used in Hurghada," "Tourist establishments in Hurghada seek to obtain environmental certificates," and "Hurghada wastewater is distilled and purified for reuse," with a mean of 4.54, 4.30, and 4.07, respectively.

Table (11): Nature of Hurghada City

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
The biodiversity of the marine environment in Hurghada helps in implementing regenerative	0	3.6	5.4	16.1	75	4.62	0.749	1	Strongly Agree
The city of Hurghada is characterized by customs and traditions that help achieve sustainable tourism development.	0	1.8	10.7	51.8	35.7	4.21	0.703	4	Strongly Agree
The availability of historical heritage areas in Hurghada helps achieve sustainable tourism development	0	0	26.8	58.9	14.3	3.88	0.631	5	Agree
The many beaches in Hurghada help achieve regenerative tourism.	0	0	10.7	21.4	67.9	4.57	0.681	3	Strongly Agree
The diversity of tourist resorts in Hurghada helps in implementing regenerative tourism.	0	1.8	7.1	21.4	69.6	4.59	0.705	2	Strongly Agree
Total Mean						4.37			Strongly Agree

Table (11) presents the means and standard deviations of the ingredients for implementing regenerative tourism in Hurghada, such as the nature of Hurghada, where the means ranged between 4.62 and 3.83 compared with the total instrument mean for the domain (4.37). The item "The biodiversity of the marine environment in Hurghada helps in implementing regenerative tourism" was ranked first with a mean and standard deviation (mean = 4.62, standard deviation = 0.749) compared with the total instrument mean and standard deviation. The item "The availability of historical

heritage areas in Hurghada helps achieve sustainable tourism development" ranked last and reached a mean of (3.88) and a standard deviation of (0.631) compared with the mean and standard deviation of the total instrument.

4.1.4 Fourth Section: What are the challenges of implementing regenerative tourism in Hurghada?

Table (12): The challenges of implementing regenerative tourism in Hurghada

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
The difficulty of tourists participating in beach cleaning operations.	1.8	14.3	16.1	30.4	37.5	3.87	1.124	5	Agree
Weak financial support for implementing sustainable development.	0	5.4	10.7	33.9	50	4.29	0.864	2	strongly agree
The tourist influx negatively affects the customs and traditions of society.	0	12.5	30.4	12.5	44.6	3.89	1.118	4	Agree
Tourist influx negatively affects the environment.	0	8.9	14.3	16.1	60.7	4.29	1.017	3	strongly agree
Lack of training and skills hinder the implementation of regenerative tourism.	0	0	8.9	19.6	71.4	4.62	0.645	1	strongly agree
Total Mean						4.19			Agree

The table clarifies the challenges that face implementing regenerative tourism in Hurghada, and the most common items are "Lack of training and skills hinder the implementation of regenerative tourism" and "Weak financial support for implementing sustainable development" and "Tourist influx negatively affects the environment," with a mean of 4.62 and 4.29, respectively.

4.1.5 Fifth Section: What are the benefits of implementing regenerative tourism in Hurghada?

Table (13): The benefits of implementing regenerative tourism in Hurghada

Variables	S D	D	N	A	S A	Mean	Std Deviation	Rank	Attitude
Implementing regenerative tourism in Hurghada will help support environmental trends such as the green economy and green cities.	0	0	3.6	12.5	83.9	4.80	0.499	2	Strongly Agree
Implementing regenerative tourism in Hurghada will enhance the cleanliness and protection of the environment.	0	0	3.6	10.7	85.7	4.82	0.469	1	Strongly Agree

Implementing regenerative tourism in Hurghada will help preserve biodiversity.	0	0	3.6	15.2	81.2	4.76	0.510	3	Strongly Agree	
Regenerative tourism will support small projects and craft industries.	0	0	3.6	30.4	66.1	4.62	0.555	6	Strongly Agree	
Regenerative tourism will support the building of a new brand for Hurghada.	0	0	3.6	21.4	75	4.71	0.527	4	Strongly Agree	
The application of regenerative tourism in Hurghada will support sustainable tourism development.	0	0	5.4	10.7	83.9	4.79	0.527	5	Strongly Agree	
Total Mean						4.75				Strongly Agree

Table (13) presents the means and standard deviations of the benefits of implementing regenerative tourism in Hurghada, where the means ranged between 4.82 and 4.62 compared with the total instrument mean for the domain (4.75). The item "Implementing regenerative tourism in Hurghada will enhance the cleanliness and protection of the environment" ranked first with a mean and standard deviation (mean = 4.82, standard deviation = 0.469) compared with the total instrument mean and standard deviation. The item "Regenerative tourism will support small projects and craft industries" ranked last and reached a mean of (4.62) and a standard deviation of (0.555) compared with the mean and standard deviation of the total instrument.

4.2 Pearson Correlation analyses

Table (14) Pearson Correlation between the basics of applying regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada

		The benefits of implementing regenerative tourism in Hurghada
The basics of applying regenerative tourism in Hurghada.	Correlation Coefficient	0.788**
	Sig.	0.000

The table shows that there is a significant positive relationship between the basics of applying regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada. The value of the Pearson correlation coefficient was (0.788** - sig = 0.000). These results showed that there is a strong positive relationship between the basics of applying regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada. As the basics of applying regenerative tourism in Hurghada increase, the benefits of implementing regenerative tourism in Hurghada also increase.

Table (15) Pearson Correlation between the ingredients for implementing regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada

		The benefits of implementing regenerative tourism in Hurghada
The basics of applying regenerative tourism in Hurghada.	Correlation Coefficient	0.748**
	Sig.	0.000

The table explains the significant positive relationship between the ingredients for implementing regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada. The value of the Pearson correlation coefficient was (0.748** - sig = 0.000). These results showed a strong positive relationship between the ingredients for implementing regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada. This positive correlation indicates that as the ingredients for implementing regenerative tourism in Hurghada increase, the benefits of implementing regenerative tourism in Hurghada increase.

4.3 Regression

Table (16) Simple Linear Regression analysis

	R	R2	F	Beta	Sig.	Result
The basics of applying regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada.	0.788 ^a	0.621	180.160	0.788	0.000 ^b	acceptable
The ingredients for implementing regenerative tourism in Hurghada and the benefits of implementing regenerative tourism in Hurghada.	0.748 ^a	0.559	139.308	0.748	0.000 ^b	acceptable

From the results in Table 11, the impact of the basics of applying regenerative tourism in Hurghada on the benefits of implementing regenerative tourism in Hurghada was 78.8%. The results of simple linear regression analysis show that the impact of the ingredients for implementing regenerative tourism in Hurghada on the benefits of implementing regenerative tourism in Hurghada was 74.8%.

4.4 Findings and Discussion of the Interviews with the managers of tour operators and diving Center Managers in Hurghada

4.4.1 Analysis of the interviews with the managers of tour operators in Hurghada.

The researcher conducted interviews with the managers of 10 tour operators in Hurghada. The interviewees (A, B, C, D, E, F, G, H, I, and J) were requested to add any comments or detailed answers that may help apply regenerative tourism in Hurghada. In the interview, the researcher tried to answer the following questions:

1- How can tourism services be increased in high-demand seasons while preserving resources?

A and I: Training employees on resource management.

B, C and E: The timing and number are coordinated according to the carrying capacity.

D : Tourist groups are coordinated.

F, G, Hand J: Tourist groups are increased without taking resources into account.

2- Is there any interest in folkloric parties on safari trips in Hurghada?

There is a general consensus on organizing folklore parties on safari trips in Hurghada.

3- Does sustainable tourism development increase tourism revenues in Hurghada?

A, B, C, D and F: achieving sustainable tourism development increases tourism revenues.

E, G and I: There is no effect because the tourist in any way preserves the environment.

Hand J: Hotels and resorts don't care about achieving sustainable tourism development.

4- Are Bedouin meals prepared on safaris in Hurghada?

There is a general consensus that Bedouin foods are not served on safari trips in Hurghada but rather the usual meals.

5- Is it possible to apply new and unconventional eco-tourism activities that suit the requirements of tourists?

A, C, D and G: Sure, as tourists prefer everything that is new.

B, E, F and I: see that there is a possibility to renew activities.

H and J: Tourist trends do not change, so there is no need for innovation.

6- How do tourism programs encourage visitors to learn about the history and culture of society in Hurghada?

A and C: We reduce sending tourists to public and historical areas for bad treatment.

B: The visiting areas are explained to tourists before the trip.

D: Tours are conducted within the city (the Great Mosque, the Marina, the tourist mall, the Coptic Church) and the historical areas.

E, H and J: There are no important historical or cultural areas in Hurghada.

I and F: Tourists in Hurghada prefer recreational tourism; they don't interest historic areas.

F and G: Historical and cultural areas are only slightly included in tourist programs.

7- Are environmental activities that depend on the participation of tourists and locals organized?

A, C, D and E: So little hotels.

B, F, G, I and J: It doesn't work.

H: It takes a random form, in which tourists or locals participate individually.

8- We welcome any additions or suggestions that support applying regenerative tourism.

A, B, D and H: Improving methods of dealing with tourists.

C, F and J: Planting more trees in the streets of Hurghada.

4.4.2 Analysis of the interviews with the managers of diving centers in Hurghada

The researcher also conducted interviews with the managers of 10 diving centers in Hurghada. The interviewees (A, B, C, D, E, F, G, H, I, and J) were requested to add any comments or detailed answers that may help apply regenerative tourism in Hurghada. In the interview, the researcher tried to answer the following questions:

1- How does boat maintenance take into account the marine environment?

A: Boat maintenance includes changing the wood, metal polishing, and support insulation.

B, E and F: The boats are maintained every year.

C: The boat is raised on scaffolds to be checked in the boat maintenance workshop.

D, I and J: Maintenance is carried out periodically, but without censorship.

G: Maintenance is carried out in the boat maintenance workshop « Qazaq » within a week.

H: Maintenance is the best option due to the high cost of manufacturing and licensing boats.

2- How are diving trips carried out in the context of preserving the marine environment?

A, F and I: There is no control over diving trips, despite the presence of guidance institutions. The center is responsible for advising tourists on how preserve the marine environment.

B, C, E and J: We warn not to touch any object underwater, whether reefs, fish, or feed them.

D, G and H: We assure not dealing with any living or non-living objects for their safety.

3- Do you consider the carrying capacity of the boats? How is it determined?

A, B, C, E, G and H: The navigational license is issued by the Hurghada Maritime Inspection Authority, which determines the number of tourists according to the size of the boat.

D, F, I and J: A maximum limit is specified for the number of tourists by the Maritime Inspection Authority.

4- Is there environmental awareness training for employees? How is it done?

A: To obtain a license, divers must pass training in (PADI¹ - CMAS² - SDI³)

B, C, F, G and J: (HEPCA⁴) organizes environmental awareness courses for employees.

1- The Professional Association of Diving Instructors (PADI)

2- Confédération Mondiale des Activités Subaquatiques/TheWorld Underwater (CMAS)

3- Scuba Diving International (SDI)

D, E, H, I: Environmental awareness training for employees is conducted regularly.

5- What are the most important environmental practices followed on board the boat?

A, G, H and J: There are signs stressing not to throw anything into the water or feed the fish and to keep the place clean.

B, D and F: Waste is collected at the end of the trip for disposal.

C, E and I: In some boats, waste is collected at the end of the trip to be disposed of in the water.

6- What are the most important challenges facing protecting the marine environment and hindering its preservation during diving activities?

A, B, G and J: Some mechanical parts of boats are thrown into the water or on the beach.

B, C and F: Destruction of coral reefs by anchors.

All of the interviewees: absence Censorship.

7- How can the aforementioned challenges be met, from your point of view?

All of the interviewees suggested:

- Tighten the control over diving centers.
- Preparing awareness campaigns on correct environmental practices.

5. Summary and conclusion

Hurghada holds varied ingredients and attractions that help applying regenerative tourism the positive and active paradigm that restores destinations and faces pollution by using renewable energy sources, distilling wastewater for reuse, and benefits the local community from tourism revenues. There are many factors help applying regenerative tourism in Hurghada such as customs and traditions of locals, diversity of resorts and beaches, cooperation between various government institutions and stakeholders (hotels, diving centers, restaurants, and bazaars) - but it's important to involve local communities - in development and planning.

There is an existing governmental strategy to achieve sustainable development, so we are in a need to support sustainable trends in tourism such as regenerative tourism that supports environmental trends such as the green economy and green cities, enhances small projects and craft industries, will help building a new brand for Hurghada.

6. Recommendations

In this section, a set of recommendations is proposed to prop applying regenerative tourism to Hurghada. These recommendations are designed based on the results and directed to:

- 1) Recommendations directed to the General Administration of Environmental Affairs in the Red Sea Governorate, the Egyptian Authority for Maritime Safety in Hurghada (EAMS), and Hurghada Environmental Protection and Conservation Association (HEPKA)

⁴- Hurghada Environmental Protection & Conservation Association (HEPKA)

- 1- It's important to tighten control over diving centers. as some mechanical parts of boats are thrown into the water or on the beach.
 - 2- Boat upkeep should be subject to stricter regulations.
 - 3- The carrying capacity of resources must be considered.
- 2) Recommendations directed to the Departments of Planning and Tourism in the Red Sea Governorate
- 1- Novel and atypical eco-tourism activities should be implemented.
 - 2- Local residents should be involved in tourism planning in Hurghada.
 - 3- Hurghada streets need to have more trees planted in them.
- 3) Recommendations directed to tour operators in Hurghada
- 1- Bedouin cuisine in Hurghada should be provided in accordance with the traditional folklore of the culture.
- 4) Recommendations directed to the Ministry of Tourism and Antiquities
- 1- Financial support for implementing sustainable development should be increased.
 - 2- Regenerative tourism should be applied and promoted to preserve Egyptian tourist destinations.

References

- 1- Alrashed, S., Min-Allah, N., Saxena, A., Ali, I., & Mehmood, R. (2020). Impact of lockdowns on the spread of COVID-19, Saudi Arabia. *Informatics in Medicine Unlocked*, 20, 100420.
- 2- Anderson, W., & Westcott, M. (2020). *Introduction to Tourism and Hospitality in BC*. BCcampus: Victoria, BC, Canada.
- 3- Axinte, L. F., Mehmood, A., Marsden, T., & Roep, D. (2019). Regenerative city-regions: a new conceptual framework. *Regional Studies, Regional Science*. 6(1), 117-129.
- 4- Bellato, L., Frantzeskaki, N., tebrakunna country and, Lee, E., Cheer, J. M., & Peters, A. (2023). Transformative epistemologies for regenerative tourism: towards a decolonial paradigm in science and practice?. *Journal of Sustainable Tourism*, 1-21.
- 5- Brouder, P., Teoh, S., Salazar, N. B., Mostafanezhad, M., Pung, J. M., Lapointe, D., Higgins Desboilles, F., Haywood, M., Hall, M. C., & Clausen, H. B. (2020). Reflections and discussions: tourism matters in the new normal post COVID-19. *Tourism Geographies*, 22(3), 735-746.
- 6- Carpenter, A. (2019). Oil pollution in the North Sea: the impact of governance measures on oil pollution over several decades. *Hydrobiologia*, 845(1), 109-127.
- 7- Cave, J., & Dredge, D., (2020) Regenerative Tourism Needs Diverse Economic Practices, *Tourism Geographies*, 22:3, 503-513.
- 8- Chamber of Diving and Watersports (CDWS) Egypt, (2023), Members Directory.
- 9- Centre for the Promotion of Imports (CBI), (2022), Regenerative tourism: moving beyond sustainable and responsible tourism, The Netherlands Ministry of Foreign Affairs.
- 10- Egyptian Cabinet Information and Decision Support Center (IDSC), (2021) Information and Statistics Department, Red Sea Governorate Tourism statistics.
- 11- Egyptian Ministry of Civil Aviation, (2023), Hurghada International Airport.
- 12- European Code of Conduct for Coastal Zones (ECCCZ). (1998), The Committee for the Activities of the Council of Europe in the Field of Biological and Landscape Diversity, Strasbourg.
- 13- European Union, (2012), Consolidated Version of the Treaty on European Union.
- 14- Glusac, E. (2020). Move Over, Sustainable Travel. Regenerative Travel Has Arrived.
- 15- Hartman, S., Papp, B., (2021), Towards Destination Stewardship Achieving Destination Stewardship through scenarios & a Governance Diagnostics framework, World Travel & Tourism Council (WWTC).
- 16- Manniche J., LarsenK. T., Broegaard R. B. and Holland E., (2018), Destination: A circular Tourism Economy A Handbook for Transitioning Toward a Circular Economy within The Tourism and Hospitality Sectors in the South Baltic Region, Centre for Regional and Tourism Research (CRT), 17.
- 17- Matunga, H., Matunga, H., & Urlich, S., (2020), From Exploitative to Regenerative Tourism, Tino rangatiratanga and tourism in Aotearoa New Zealand, *Mai Journal*, 9 (3), 296- 308.
- 18- Oliver, K., A., (2021), New Directions for Tourism in Guanajuato: Stakeholder-Driven and Regenerative Post-Covid Micro initiatives, Baltimore, USA, pp; 5:9.
- 19- Pollock, A. (2019). Regenerative Tourism: The Natural Maturation of Sustainability.
- 20- Pollock, A. (2020) International tourism consultant. Hawaii Tourism Authority, Maui Nui, Destination Management Action Plan 2021-2023, 3.

- 21- Regenerative Travel (2020). Regenerative travel principles for hospitality.
- 22- Royds, L.T., (2021), World Travel & Tourism Council (wttc), what-is-regenerative-travel,
- 23- Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312-321.
- 24- The International Trade Centre (ITC), (2010), *Inclusive Tourism: Linking Business Sectors to Tourism Markets*, available, Switzerland.
- 25- The Red Sea Governorate, (2022), Information and Decision Support Center, Annual Statistical Manual.
- 26- Tourism Department in the Governorate's General Office, (2020), Annual Statistics.
- 27- Tourism Department in the Governorate's General Office, (2021), Annual Statistics.
- 28- Tourism Department in the Governorate's General Office, (2022), Annual Statistics.
- 29- UNESCO World Heritage Convention (WHC.UNESCO), (2020), Experts Call for Inclusive and Regenerative Tourism to Build Back Stronger Post-COVID-19 [News Article from an Online Debate 'Culture, Tourism and COVID-19: Recovery, Resiliency and Rejuvenation'].
- 30- Zaman, U. (2023). Seizing momentum on climate action: nexus between net-zero commitment concern, destination competitiveness, influencer marketing, and regenerative tourism intention. *Sustainability*, 15(6), 5213.



تطبيق السياحة المتجددة لتعزيز التنمية السياحية المستدامة في مدينة الغردقة

محمد محمد خورشيد

باحث بقسم الدراسات السياحية
كلية السياحة والفنادق جامعة المنيا

أ.م.د. / أسماء عبدالرؤف خلف

أستاذ مساعد الدراسات السياحية
كلية السياحة والفنادق - جامعة المنيا

أ.م.د. / مروة سيد وهبه محمود

أستاذ مساعد الدراسات السياحية
كلية السياحة والفنادق - جامعة الفيوم

المستخلص

تهتم السياحة المتجددة بتحسين الوجهة السياحية لتكون أفضل بعد الزيارة، لذا فإن تحقيق ذلك هو مسؤولية مشتركة بين السائحين وأصحاب المصلحة. وبشكل عام، تتجاوز السياحة المتجددة النهج التقليدي المستدام؛ فهو يعتمد على أنظمة، ويتناسب مع الأنماط الثقافية والطبيعية، ويوفر طريقاً للأمام، ويهدف إلى تحقيق نتائج إيجابية بدلاً من التسبب في ضرر أقل.

تم صياغة مجموعة من المعايير لقياس مدى تطبيق السياحة التجددية في الغردقة بناءً على تحليل مراجعة الأدبيات ومع مراعاة مكونات الغردقة الطبيعية والصناعية. يهدف هذا البحث إلى استكشاف مدى جدوى تنفيذ السياحة المتجددة في الغردقة وتحديد فوائدها والتحديات التي قد تعوقها. استخدم هذا البحث المنهج الوصفي التحليلي، حيث تم إجراء المقابلات مع مديري منظمي الرحلات السياحية ومديري مراكز الغوص بالغردقة، وتم إعداد استبيان وتوزيعه على 110 من موظفي جهاز شئون البيئة المصري بمحافظة البحر الأحمر. وقد تم تحليل البيانات باستخدام الإحصاء الوصفي، وتحليل ارتباط بيرسون، وتحليل الانحدار في برنامج SPSS 22.0. وأكدت هذه التحليلات أن هناك العديد من العوامل التي تساعد على تطبيق السياحة التجددية في الغردقة، مثل تنوع المنتجعات والشواطئ، والتعاون بين مختلف المؤسسات الحكومية والجهات المعنية في التنمية والتخطيط. وتوصل البحث إلى وجود علاقة إيجابية قوية بين مقومات تنفيذ السياحة التجددية بالغردقة وفوائد تنفيذ السياحة التجددية بالغردقة.

الاستراتيجية الحكومية الحالية هي تحقيق التنمية المستدامة، لذلك نحن بحاجة إلى دعم الاتجاهات المستدامة في السياحة مثل السياحة المتجددة التي تعزز الاتجاهات البديلة مثل الاقتصاد الأخضر والمدن الخضراء، وتعزز المشاريع الصغيرة والصناعات الحرفية، وتساعد على بناء علامة تجارية جديدة للسياحة. الغردقة. لذا يوصي هذا البحث بضرورة تطبيق السياحة المتجددة والترويج لها للحفاظ على مدينة الغردقة والوجهات الساحلية في مصر من أجل تعزيز التنمية السياحية المستدامة.

الكلمات الدالة: الغردقة السياحة المتجددة التنمية السياحية المستدامة