Ministry of Environment and Climate Change Ministry of Environment and Climate Change

State of Qatar

"Marine Environment ..... Let's Preserve Our Continuing Legacy"

Marine Life Forum Report

Under the Patronage and Presence of

His Excellency Dr. Eng. Abdullah bin Abdulaziz bin Turki Al Subaie

Minister of Environment and Climate Change

Marine Life Forum

"Coral Reefs ..... Protection and Development " Forum

Slogan: "Marine Environment" ..... Let's Preserve Our Continuing Legacy"

Tuesday, 28 January 2025, 10:00 - 11:00 am, Dusit Doha Hotel

The Ministry of Environment and Climate Change organized the Marine Life Forum 2025, under the slogan " Marine Environment" ..... Let's Preserve Our Continuing Legacy, titled: "Coral Reefs Protection and Development", in the presence of His Excellency Eng. Abdulaziz bin Ahmed bin Abdullah Al Mahmoud, Undersecretary of the Ministry of Environment and Climate Change, and a number of excellencies, assistant undersecretaries, departments directors, officials, experts, academics and those interested in wildlife.

Objectives of the Forum

Under the auspices of His Excellency Dr. Abdullah bin Abdulaziz bin Turki Al Subaie, Minister of Environment and Climate Change, the forum sought to strengthen the preservation of Qatar's marine resources, particularly coral reefs, and work on their sustainability as part of the nation's commitment to preserving the marine environment and its biodiversity, in accordance with the Qatar National Vision 2030, which prioritizes environmental protection.

Forum’s Pillars

The activities undertaken by the Ministry of Environment and Climate Change to protect coral reefs in Qatari waters, along with the challenges affecting the implementation of related plans and programs.

The involvement of amateurs and volunteers in coral reef conservation efforts within the country.

Suggested tips and recommendations for preserving coral reefs and the roles played by governmental, private, and other entities in their protection and development.

The contribution of academic institutions and universities through scientific research and practical studies aimed at preserving coral reefs in Qatar, including proposed scientific and technical methods for enhancing natural coral reefs.

The influence of various media outlets in promoting awareness and education for coral reef conservation and development.

Learning from the experiences of GCC countries in coral reef protection and development to implement sustainable marine life systems.

International agreements and treaties relevant to the sustainability and development of coral reefs.

Laws, regulations, and ministerial decisions regarding the protection of coral reefs in Qatar, including prohibitions against activities that could harm or diminish their aesthetic or ecological value.

The significance of coral reefs in supporting and enhancing ecotourism.

Participating Guests

1. Prof. Shaker Hamza Al Hazeem from the State of Kuwait.

2. Prof. Mohsen Abdullah Al Ansi Al Yafei, Qatar University

3. Brigadier General Mohamed Yousef Al Jaidah, environmental activist

4. Mr. Yousef Ibrahim Al Hamar, Director of the Wildlife Department, Protection and Natural Protection Sector, Ministry of Environment and Climate Change

Panel Discussion: Coral Reefs. Protection & Development

A panel discussion titled "Coral Reefs... Protection and Development" examined the remedies and suggestions made in the United Nations Environment Programme's 2023 report on the value of preserving coral reefs and the necessity of refraining from actions that could cause them to deteriorate.

A call to protect our marine treasures

The panel discussion was moderated by Dr. Mohammed Saif Al Kuwari, Chairman of the Forum, with the participation of a number of experts, including Prof. Dr. Shaker Hamza Hussein Al Hazeem from the State of Kuwait, Dr. Mohsen Abdullah Al Yafei from Qatar University, environmental activist Brigadier General Mohammed Yousef Al Jidah, and Mr. Yousef Ibrahim Al Hamar, Director of the Wildlife Development Department at the Ministry of Environment and Climate Change, while the panel discussion was presented by Mr. Jassim Mohammed Lari, Head of the Marine Wildlife Development Department at the Ministry of Environment and Climate Change.

Dr. Mohammed Saif Al Kuwari, President of the Forum

The attendees were greeted and informed at the outset of the discussion that it was being held by the Ministry of Environment and Climate Change under the title "Coral Reefs. The forum serves as a genuine call to responsibility for our marine treasures, particularly coral reefs, which are regarded as one of the most significant marine systems and are a source of rich marine life. This is in line with the State of Qatar's commitment to protecting the marine environment as a sustainable legacy for future generations.

In accordance with Qatar National Vision 2030, which prioritizes the environment, they talked about strategies to preserve coral reefs and learned about the newest programs and technology to advance them and guarantee their survival.

The forum began with a recitation of the verses of the Holy Quran, where the verses of Surat Al Nahl were recited: In the name of Allah, the Most Gracious, the Most Merciful: “And it is He who subjected the sea for you to eat from it tender meat and to extract from it ornaments which you wear. And you see the ships plowing through it, and [He subjected it] that you may seek of His bounty; and perhaps you will be grateful. And He has cast into the earth firmly set mountains, lest it shift with you, and [made] rivers and roads, that you may be guided.”

At the beginning of his opening speech, Dr. Mohammed Saif Al Kuwari, Undersecretary of the Ministry of Environment and Climate Change, Undersecretary of the Ministry of Environment and Climate Change, Assistant Undersecretary for Natural Protection Affairs at the Ministry of Environment and Climate Change, welcomed their excellencies assistant undersecretaries and distinguished guests.

Dr. Al Kuwari said: " I am honoured to stand before you today at this forum, which sheds light on one of the most important components of biodiversity and wildlife, which is coral reefs, which represent one of the pillars of the marine and national ecosystem millions of living organisms.

Coral Reefs in Qatar

"United Nations reports have confirmed that 70% of the world's coral reefs are in danger, with 20% already destroyed and not expected to grow back, 24% at risk of impending collapse, and another 26% at risk of longer-term threats." 40% of the world's population, or 3.1 billion people, live within 100 kilometres of the ocean, making the massive losses to which coastal ecosystems are subject an economic and social concern. This makes the deterioration of coastal ecosystems especially troublesome.

Dr. Al Kuwari noted that in light of these difficulties, the State of Qatar has made biodiversity preservation and environmental protection a top priority in its National Vision 2030. The preservation of coral reefs is a component of this commitment, which acknowledges the reefs' critical role in maintaining environmental balance and safeguarding our marine wealth for future generations.

Dr. Al Kuwari continued that within the framework of these efforts, the Ministry of Environment and Climate Change launched, during the past year 2024, the program for the protection and restoration of coral reefs for the country, where the Ministry worked through this project to survey and study 17 sites in Qatari territorial waters, with the aim of studying the status and status of coral reefs and associated species, and working to develop and increase the number of coral reefs and restore the affected areas, as the study seeks to identify areas rich in coral reefs that Reefs can be transferred from them, which are so-called donor areas, as well as identifying the affected areas suitable for receiving new reefs so that the process of planting coral reefs takes place, making this project one of the leading projects in the State of Qatar to develop wildlife in the territorial waters of the State of Qatar.

Notably, this project has yielded numerous benefits and advantages that have enhanced the State of Qatar's biodiversity base, which will benefit researchers and experts studying the country's marine environment. Additionally, this study led to the first detection of two soft coral species in Qatar, in addition to 40 other hard coral species. The study also found that there are five other types of soft corals, two of which are found in deep water and three of which are found in shallow waters. These findings

demonstrate the richness of the country's marine environment and territorial waters with a wide variety of biodiversity and ecosystems.

This program also comes as part of the efforts of the Ministry of Environment and Climate Change to implement the Third National Development Strategy 2024-2030 and the National Plan for Biodiversity, in a way that contributes to achieving the Qatar National Vision 2030, and within the commitment of the State of Qatar to implement the United Nations Convention on Biological Diversity.

Emphasizing the State of Qatar's commitment to wildlife conservation, and to enhance marine life in Qatar, the Ministry of Environment and Climate Change - Protection and Protected Areas Sector - is organizing the Marine Wildlife Forum 2025 entitled "Coral Reefs... Protection and Development", the Ministry also chose the slogan for this forum, which is "Marine Environment... Let's preserve our continuing legacy."

Dr. Al Kuwari pointed out that the preservation of coral reefs is not just a national duty, but a shared global responsibility that requires concerted efforts and unified visions.

As he wrapped off his remarks, Dr. Al Kuwari emphasized Qatar's unwavering dedication to preserving the environment and constructing a sustainable future for coming generations while urging greater collaboration and teamwork to safeguard this priceless natural asset. pleading with God to bless everyone with success for the benefit of humanity.

Kuwait's Experience in Coral Reef Sustainability

The film, which was prepared by Prof. Shaker Hamza Hussein Al Hazeem, then reviewed the experience of the State of Kuwait in the areas of coral reef development, sustainability, and protection. He explained in detail the 35 species of coral reefs in Kuwait, the kinds of attacks they face, and the natural consequences of coral reef mortality, including climate change.

Dr. Al Hazeem reviewed the general situation of coral reefs in the Caper Islands, which are frequented on holidays by about 700 cruisers and yachts, in addition to the islands of Qaruh and Um Al Maradam, noting that in 2005 the "Marina" was established, which led to the loss of about 30% of the coral reefs.

Dr. Al Hazeem pointed out that there have been intensive studies since the early eighties on Kuwaiti coral reefs, especially in the islands of Kubar, Qaruh and Um Al Maradam, where studies have shown that they are exposed to a lot of environmental attacks and damage as a result of the use of fishermen for fishing and other means used in breaking coral reefs that take decades to regrow, and thus the loss of fish stocks because many fish resort to coral reefs to reproduce and protect their young from other organisms, not to mention the endangered turtles that It resorts to Kuwait to lay its eggs in the seventh and eighth months, and the hatching process takes place in November, but it faces destruction and rubble, not to mention facing the nets, which leads to its death and thus a compound loss of environmental biodiversity.

Prof. Shaker Hamza Hussein Al Hazeem

Dr. Al Hazeem continued: "A lot of waste is thrown on coral reefs and affects the growth and beauty of coral reefs, and there are 35 types of coral reefs in Kuwait, while there are 50 species in Qatar, due to the geographical location of both countries and Kuwait's location in the far north of the Gulf, and there are 6 types of them without algae and the Yusr stone (black coral) is extracted from them."

In addition to natural influences, as climate change is one of the primary causes of coral death reefs, Dr. Al Hazeem pointed out that the main coral reefs in Kuwait are vulnerable to attacks from marine pioneers and dust-laden natural currents brought on by urban activity.

The teamwork and cooperation of all state entities in the meticulous restoration of these losses is the key to the success of coral reef rehabilitation studies in Kuwait.

Dr. Al Hazeem touched on a study by a doctoral student in aerial photography and monitoring changes on coral reefs to determine the location that coral reefs are affected by, as the main cause of coral death was the dust loaded with sea currents that fall on coral reefs and cause their death and almost about 60% of coral reefs are destroyed as a result of this main factor, pointing out that there are tight plans to develop coral reefs and plant them in a paired and non-mating manner, where the interbreeding is by taking some reefs Fallen corals due to sea pioneers, taking and planting them in areas and places where they are fixed and contribute to the rehabilitation of coral reefs, and artificial colonies have been placed to settle fish in them, thus contributing to the revival of coral reefs and reducing dust on coral reefs.

Qatar's experience in protecting coral reefs

After that, a film was screened about the experience of the State of Qatar in the field of protection, development and sustainability of coral reefs, prepared by Prof. Dr. Mohsen Abdullah Al Yafei from Qatar University.

At the beginning of his speech, Dr. Al Yafei expressed his happiness to participate in the panel discussion on coral reefs, stressing the importance of this topic for the Qatari environment, and demanding that it be preserved as a result of the boom that the country is witnessing in recent years, pointing out that the State of Qatar is characterized by coastlines that extend for more than 700 kilometres compared to the longest distance on earth, which is 200 kilometres, as most of Qatar's beaches are on the coast and are located in the middle of the Gulf and have a diversity of more than fifty types of coral and many of objects.

Prof. Mohsen Al Yafei

After that, scenes were shown showing the beauty of coral reefs, which are considered a tourist destination in many countries, and the area of coral reefs is one percent of the ocean area, while it contains 25% of the species in the world.

Scenes were also shown showing the locations of coral in Qatar, in some of the Hayrs such as the Western Add and Hayr Al Hala, which is characterized by live corals, as well as models of Hayrs near Halul Island, which are areas relatively far from the arrival of some fishermen where coral can preserve it from human tampering.

Dr. Mohsen Al Yafei reviewed two types of coral reefs (hard and soft). Dr. Al Yafei also pointed out that the first phenomenon of global warming occurred in 1996 when the water temperature reached 35 degrees Celsius, which is more than the energy of the coral, and therefore begins with the occurrence of the phenomenon of bleaching of coral and then dies, and this phenomenon occurs at the end of August or the beginning of September of each year, in addition to the presence of waste because many fishermen and sea-goers dispose of their waste. In the sea, if a simple cloth is thrown that causes the death of coral, coral is a very sensitive object, and samples of the remnants found during the filming were displayed.

Al Kuwari then began the panel discussion with Dr. Shaker, where he thanked him at the beginning for his presence and for the efforts of the State of Kuwait in preserving coral reefs, asking him a question about the challenges facing the State of Kuwait in protecting coral reefs, and ways to develop or innovate modern methods and methods for the development of these coral reefs.

For his part, Dr. Shaker thanked Dr. Al Kuwari for the warm welcome, pointing out that the experience of Kuwait achieved initial successes, but ambition is the best success for this experience.

Dr. Shaker added: " One of the secrets of the success of coral reef rehabilitation is from the pioneers of the islands, where nothing is done or any success is achieved in the rehabilitation of coral reefs unless there is solidarity between all parties and all efforts are united on the same place.

Dr. Shaker emphasized that island visitors will appreciate coral reefs more if they are involved in their rehabilitation, such as replanting corals. As the number of visitors and divers grows each year, engaging them in this activity promotes environmental preservation and encourages self-preservation among the island's visitors.

Dr. Al Kuwari inquired Dr. Shaker about enhancing efforts to preserve marine organisms, emphasizing the existing challenges and encroachment faced by these creatures. He highlighted the need for the ministry or environmental authority to increase awareness and education among individuals who frequent the sea, such as fishermen, divers, and others.

In response to Dr. Al Kuwari's question, Dr. Shaker replied: There is a very essential point, which is the association of the bodies with each other and their understanding of those in charge of the field of work, pointing out that there are protected islands that cannot be reached, but they are in fact protected from the island's pioneers and not on researchers, so a decision must be taken by the responsible authorities to exclude scholars and contributors to the rehabilitation of coral reefs.

Dr. Al Kuwari proceeded to inquire with Dr. Mohsen Al Yafei regarding the research conducted by Qatar University, including their work on deep-sea exploration and the documentation of marine life. Additionally, he asked about the potential solutions for preserving coral reefs in Qatar.

Dr. Mohsen Al Yafei said: If we go back in time 30 years, we find that Qatar was more like the Maldives, where coral reefs were widely spread in a number of beaches, for example Ras Bu Abboud Beach and in the north Saif Al Mara'a and Halul Island, but as a result of the economic boom in the eighties and the ownership of many people boats, cars and fishing nets and the lack of control led to the death of most of the coral reefs near the coast, because access to them is easy and the death of the reefs has become Coral gradually according to the ability of human access to it, and there are approximately one and a half million paralyzing operations in fishing vessels, not to mention fishermen, fishing means that are left in the depths, pollution that occurs, temperature rise and other pressures on the environment.

Dr. Mohsen Al Yafei stated, "In the Maldives, fishing without a line is prohibited to preserve natural resources."

Dr. Al Yafei pointed out that when Qatar decided to ban shrimp fishing in the early nineties, many people, especially fishermen, objected to the decision, but now as a result of this decision, the State of Qatar has become one of the most countries that have preserved fish stocks, and many neighbouring countries have prevented shrimp fishing because they discovered the danger of this on fish stocks.

Dr. Al Yafei continued: "Fishing by "gargair", which are fish cages based on the seabed, have negatives on the environment, as they are thrown on reef areas and then pulled with a squatter and their waste is left, so I propose to ban "gargair" permanently in the State of Qatar for a period ranging from 5 to 10 years until the environment recovers and fish stocks are preserved.

Dr. Al Yafei also touched on the importance of awareness and the need to join efforts with the Ministry of Environment and Climate Change to preserve the environment at all levels, and to enact laws and legislations that may be difficult now, but their result will be useful and clear in the future.

Dr. Al Kuwari then handed over to Brigadier General Mohammed Yousef Al Jaidah, who thanked for the invitation and emphasized the importance of making firm decisions without emotion in environmental preservation.

Brigadier Mohamed Yousef Al Jidah

Al Jaidah stated: "We initiated the artificial coral reef project at the Qatar Scientific Club in 1996. This marked the beginning of our efforts to study the growth and prosperity of coral using various materials. Through this process, we acquired significant experience. Over a span of ten years, we conducted corrections and modifications until we developed the appropriate mixture and design. We came to understand that we were not creating coral reefs themselves but rather establishing the foundation upon which coral reefs could thrive. Thus, we do not manufacture artificial coral reefs; instead, we produce a suitable substrate or soil for the climate. In

certain locations, we identified plankton or coral soil conducive to coral growth, allowing us to relocate reefs and commence planting small sections of coral.

In the United States, researchers discovered the potential for overlap and cohesion within the same colony, enabling the planting of reefs adjacent to each other based on these interactions. Coral requires a specific size to initiate production. We began understanding how to expedite the growth process with the assistance of global advancements. While traditionally, achieving maturity takes approximately 10 to 12 years, recent developments have enabled us to reach this stage within one year."

Al Jaidah explained: When we began at the scientific club, we noticed the impact of placing cars and tires in the sea, which attracted fish but didn't provide suitable conditions for laying eggs. We found that the heavy metals from these materials are toxic to fish. Instead, we developed an environmentally friendly design using rocks and artificial coral reefs, which proved better than black lime due to its light color, attracting coral larvae naturally.

Regarding the coral reefs in the State of Qatar, Al Jaidah emphasized that they have experienced significant degradation, especially in 1996 due to thermal increases, leading to substantial mortality. Coral near the shore faces significant pressures from high temperatures, expansion, and development projects, resulting in nearly extensive coral damage. However, in recent years, there have been observations of areas where coral has begun to thrive, adapting to temperature rises up to 38 degrees Celsius.

Halul Island is particularly important for the biodiversity of Qatar as it provides the genetic foundation for coral growth. Preserving the remaining coral and implementing fishing restrictions in specific areas are crucial steps in this effort.

Brigadier General Al Jaidah mentioned that the Ministry of Municipality has made progress in fish farming, which will help mitigate fishing activities. Unlike other countries where shrimp is farmed, it is still caught in the Gulf regions. Advances in farming and technology have simplified these processes, but strict regulation is essential. Approaching "Fasht Al Dibal" within less than 300 meters constitutes a clear violation.

Dr. Al Kuwari concluded the panel discussion with Mr. Yousef Ibrahim Al Hamar, Director of the Wildlife Development Department at the Ministry of Environment and Climate Change, who commended such forums. He pointed out that academics and ministry programs have identified several problems and obstacles.

Mr. Yousef Ibrahim Al Hamar

The Ministry of Environment and Climate Change is enhancing protection for coral reefs through monitoring, awareness campaigns, and updated legislation. Cooperation with academics helps inform these efforts. The ministry uses social media in multiple languages to raise awareness. Legislation is a key tool, and updates are based on academic data. There is now a dedicated marine control department. The ministry's strategy aligns with Qatar National Vision and international biodiversity conventions.

Mr. Yousef Ibrahim Al Hamar highlighted programs such as monitoring, cleaning campaigns, and aquaculture projects, which are progressing into their second phase. Fishing laws are under review, and fishing seminars strengthen awareness. Maritime inspections have improved with new boats and advanced technologies like drones and satellite tracking. Updates will be announced as needed.

In his presentation, Dr. Al Hazeem examined the Australian approach to coastal management, which he had studied in his master’s program. He highlighted the meticulous application of laws concerning coastal management, including the establishment of a specialized team called the "Coral Reef Authority" to study coral reef environments. This authority has implemented conservation laws extending over more than two thousand kilometers of coral reefs, designating areas that are completely off-limits. Additionally, the authority divided atolls into two sections: Section A permits fishing, whereas Section B prohibits any activity. Areas exhibiting good coral growth are protected to ensure sustainable harvest and prevent resource depletion and harm to reef ecosystems.

Dr. Mohsen Al Yafei commented on the misconceptions held by some community members regarding reserves, noting that many believe reserves are entirely inaccessible. However, within reserves, there are managed areas that accommodate tourist activities and events, alongside zones where fishing is permitted.

Solutions and recommendations towards coral reef sustainability

Undersecretary Abdulaziz bin Ahmed bin Abdullah Al Mahmoud presented Dr. Al Kuwari with points and videos discussed in a presentation and reiterated the Ministry of Environment and Climate Change's commitment to coral reefs. He mentioned that initiatives and projects for the protection and preservation of coral reefs will be announced soon.

The Undersecretary noted that coral reefs are beneath the sea and not visible to the public. Unlike kindergartens, which prompt complaints about environmental violations due to their visibility, coral reefs remain hidden except to specialists. Therefore, cooperation among all parties is necessary to raise public awareness, encourage the fight against improper fishing practices, and prevent coral reef damage. It is important to photograph and document farming projects before and after to show results and promote conservation efforts.

He emphasized the importance of involving the private sector in sustainability efforts to finance coral reef rehabilitation, facilitated by laws and achievements. The hope is for private sector participation to bolster environmental work. Additionally, cooperation with research bodies like Qatar University will aid in increasing studies on marine environmental development and disseminating findings to the public.

Dr. Mohammed Al Baldawi, an environmental expert at the Ministry of Environment and Climate Change, thanked participants for their valuable information during the workshop and inquired about the varying turtle egg-laying and hatching seasons among Gulf countries.

Dr. Shaker responded to Dr. Muhammad Al Baldawi's inquiry about monitoring the impact of climate change on marine life in Kuwait. He mentioned that turtles typically begin laying their eggs between 8 to 9 months, with hatching occurring from the 11th month. He noted that these timelines differ from Doha due to its geographical location and climate variations. He also shared his experience documenting and monitoring coral reef reproduction, stating that coral reef reproduction was first observed in Kuwait in May 1995 at approximately 25 degrees Celsius. The breeding process was documented again in 2017, although it did not occur in 2016 due to weather conditions.

Environmental activist and sustainability trainer Mayad Al Jassim raised concerns about endangered species, including fish and coral reefs. Dr. Mohsen Al Yafei addressed audience questions, explaining that rising temperatures are a global issue affecting both reefs and fish. He emphasized that some species cannot withstand high temperatures and highlighted the presence of rare species, noting that the last recorded shark in the Gulf was in Qatar. Dr. Al Yafei suggested fish fattening farms as an alternative to increase fish stocks and preserve the environment.

Dr. Jassim Al Khayyat, Director of the Jinan Research Ship at Qatar University, discussed varying egg-laying dates among different turtle species such as green turtles and hawksbill turtles. Dr. Ibrahim Al Muslimani, Assistant Undersecretary for Protection and Natural Reserves Affairs at the Ministry of Environment and Climate

Change, expressed gratitude to Dr. Al Kuwari and the event organizers. He underscored the private sector's role in environmental protection and highlighted the Ministry's efforts to establish marine reserves following the deterioration of herats and coral reefs.

At the conclusion of the seminar, participants were recognized by the Undersecretary of the Ministry, and commemorative photos were taken.

Thank you

Dr. Mohammed Saif Al Kuwari, Chairman of the Forum

President of the Forum