



The National Field
Research Centre for
Environmental Conservation
About innovative Environmental Research

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Sultanate of Oman
Diwan of Royal Court

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WORLD SCIENCE FORUM
2017 JORDAN
SCIENCE FOR PEACE

**International praise for
the efforts of His Majesty
The Sultan and the
Sultanate in protecting
the global environment**



**The National
Centre
Participates
in the Marine
Environment
Seminar
in London**

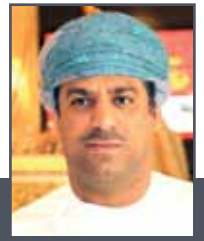


United Nations
Convention
to Combat
Desertification

Established in 1994, UNCCD is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the dry lands, where some of the most vulnerable ecosystems and peoples can be found. The Convention came into force on 17 June 1994. The UN state parties, including the Sultanate (182 countries) joined the Convention. The Sultanate joined the Convention in 1996.

AIMS OF THE CONVENTION

- Combatting desertification and alleviate the effects of draught at the countries suffering from draught.
- Implement long-term strategies that focus on improving productivity of the affected lands, rehabilitate these lands and maintain the water sources and lands in addition to ensuring sustainable management of such lands.
- Take effective measure in collaboration with countries of the work and within partnership that are in line with the agenda of the 21st century to achieve the aims of sustainable development.



point of view

The Prize.. A Lofty Idea

Dawood Sulaiman Al Balushi
Editor-in-Chief

The Sultan Qaboos Environmental Protection Award puts the Sultanate of Oman at the forefront of the World countries which care for environment. It was an expression of the noble and enlightened thought of His Majesty Sultan Qaboos bin Said and his special and continuous interest in the environment and the importance of preserving the natural resources. His Majesty believes that environmental peace, preservation of the wildlife, and protecting the natural resources from degradation and extinction is the right and safe way to achieve the prosperity of the world.

As Omanis, we have every reason to be proud, especially as we are the ones who handed the prize over to the winners during the International Conference arranged by the UNESCO, the sponsor of His Majesty's Qaboos Environmental Protection Prize. It was a successful conference that witnessed the participations of hundreds of scientists, experts and academics of all scientific, environmental and economic fields.

This award has really contributed to the introduction of the Sultanate on the environmental, scientific and tourist level. Many of the participating scientists congratulated the Sultanate for this outstanding and continuous achievement, as well as the recognition by UNESCO.

This global environmental excellence of Oman is a source of inspiration, strength and pride for us. It motivates us to do more for preserving and sustaining this global environmental heritage, and making more effort in continuing this Omani global success.

Thanks to you, Your Majesty. It is your enlightened thinking that made it possible to achieving this excellence and this global environmental success for our beloved Sultanate. We will work hard to maintain the Omani environmental excellence at forefront of the World countries.

Crime-scene technique
used to track turtles

Scientists have used satellite tracking and a crime-scene technique to discover an important feeding ground for green turtles in the Mediterranean. Scientists have used satellite tracking and a crime-scene technique to discover an important feeding ground for green turtles in the Mediterranean. University of Exeter researchers measured «stable isotope ratios» -- a chemical signature also used by forensic scientists -- to discover which foraging grounds turtles had come from to breed in Cyprus. They discovered that Lake Bardawil, on Egypt's north coast, is now the most important foraging ground for turtles which breed at Alagadi in Cyprus. The researchers believe few breeding females came from the Lake Bardawil feeding ground until 2010. It is likely that changes to the ecosystem have made this shallow saline lake a top foraging site. «Our satellite tracking of turtles breeding in Cyprus has been going on for some years,» said senior author Professor Brendan Godley, director of the Centre for Ecology

and Conservation on the University of Exeter's Penryn Campus in Cornwall. «This meant we knew where many of the turtles went to forage for food, but our preliminary analysis using stable isotope ratios showed a major foraging area had been missed. «A large proportion of turtles had isotope ratios that did not correspond to sites previously identified, and we tracked five of them. Five out of five went to Lake Bardawil.» Green turtles swim hundreds of miles between feeding and breeding areas, and the research suggests 82 percent of females show «extremely high» consistency in isotope ratios -- meaning they keep going back to the same places. In terms of stable isotope ratios, animals «are what they eat,» meaning tests can reveal where they have spent time.



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Dr. Saif Al-Shaqsi speaks on the sidelines of the seminar and reviews the marine environment of Oman



Dr. Saif bin Rashid Al-Shaqsi, Executive Director of the National Field Research Centre for Environmental Conservation, delivered a lecture on the marine environment of Oman at the Marine Environment Seminar held at the Royal Geographical Society in London, where he was part of the Omani delegation which presented visual presentations and introduced the Oman research heritage to the audience. The delegation included Aida Al-Jabriya, representing the Ministry of Environment and Climate Affairs, and Suad Al-Harithia, representing the Environment Society of Oman (ESO).



The Executive Director of the National Centre: "We are looking forward for a new generation of young scientists and field researchers to take the lead and develop new and important surveys in the future".

On the sidelines of the Seminar, Dr. Saif bin Rashid Al-Shaqsi presented a documentary film produced by the National Field Research Centre for Environmental Conservation, which reviews the unique marine heritage in the Sultanate. In his address to the Seminar, the Executive Director of the National Centre said: I mention at the Earth Seminar in 2014 and the lecture presented by Dr. Dutton under the title «Field research in Oman - past, present and future.» We said at the time that we are looking forward to a new generation of scientists Young field researchers to take the lead and develop new and important surveys in the future. So I commend my colleagues from the field researchers - science colleagues for organizing these annual lectures. Dr. Saif reviewed the most important features of the marine heritage of the Sultanate and gave a detailed presentation on developments in marine science and conservation in the Sultanate. The Ministry of Environment and Climate Affairs and the Environment Society of Oman participated in the Seminar and played a pivotal role in introducing the Omani marine environment. The Seminar also presented technical presentations and surveys of endangered humpback whales and turtles along the coast of Oman. At a time of great

change in the Sultanate. The last 35 years have been the last significant methodological survey conducted in Oman to date, as well as the current projects led by Omani field scientists to date.

The Ministry of Environment was

Present Too

For her part, Aida Al-Jabri, acting head of the Department of Marine Life Conservation at the Ministry of Environment and Climate Affairs, gave a presentation on the cetaceans, the challenges they face and how to train those interested in dealing with «outstanding marine animals in the net» along the coast of Oman. Aida have shown procedure of tracking humpback whale in the Arabian Sea through a corridor extending to about 1150 km along the southern coast of Oman and northern Yemen. Illustrative maps of that corridor were presented. Aida also mentioned the tourist potential of dolphins and whales of Oman. In conclusion Aida spoke about the importance of protecting whales, dolphins and their habitats in the broader nature of the health of the marine environment and the ecosystem services provided by our seaside, including its role in carbon sequestration and planet regulation. Furthermore, Aida said all present that future studies of the problem of marine mammals attached to the nets require well-trained and experienced teams to assess the causes and place of death of marine mammals and to carry out laboratory work, a priority for the future.

Environment Society

Suad Al Harthy, Program Manager at the Environment Society of Oman (ESO), participated in the Seminar and presented a more impressive summary of turtles on Masirah Island, hosting the world's second largest turtle. Suad provided pictures, maps and technical summaries of turtles in Oman.



Oman Marine Heritage Exhibition

On the sidelines of the seminar, a mini-exhibition of photographs was held, including an old map of the Middle East Maps Collection of the Royal Geographical Society. Guests also enjoyed viewing books, newsletters and recent reports on the screen from the National Field Research Centre for Environmental Conservation,

Oman Environment Society, Scientific Exploration Society. Dr. Saif Al-Shaqsi presented copies of Falaj Luzugh and Jabal Akhdar books to Prince Michael, Amir Kent and the Royal Geographical Society. Aida Al-Jabri also presented the participants with a small personal memorial to the humpback whale in the Arabian Sea.

During the award At the World Science Forum

International praise for the efforts of His Majesty the Sultan and the Sultanate in protecting the global environment

◆ Edited by: **Dawood Bin Sulaiman Al Balushy**

◆ **A** global ceremony was held to deliver the Sultan Qaboos International Prize for Environmental Protection 2017 as part of the International Science Forum held by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in the Dead Sea area. Many guests praised the efforts of His Majesty the Sultan and the role of the Sultanate in protecting the global environment, in light of the massive urbanization and climate change on the globe, and noted that the award is one of the most prestigious awards in the world, which gives the environment, and has a place in the world, especially in light of the environmental challenges that plague the high. The award motivates the people of the «environment» to sharpen their minds by dealing with this serious file, which is the greatest challenge to the world. They also thanked His Majesty Sultan Qaboos -Allah protects him- and the Sultanate for the beautiful initiative that gives a wonderful impression of the Arab Countries by sending a message to the Western World that the Arabs have a great interest in the environment.



By the Commission of His Majesty Sultan Qaboos bin Said, the Minister of Education and Chairman of the Omani National Committee for Education, Culture and Science, H. E. Dr. Madiha Al Shibanah, delivered the Sultan Qaboos Prize for Environmental Protection in its 14th session for the year 2017, to the National Parks Board of Singapore, according to the recommendation of the Jury of the Secretariat of UNESCO's Man and the Ocean Program, during the 2017 World Science Forum at the shores of the Dead Sea under the theme «Science for Peace». The forum was attended by about 3,000 leading scientists, political leaders, academics, decision-makers and investors from more than 120 countries. The forum also was attended by King Abdullah II of the Hashemite Kingdom of Jordan and Hungarian President Janusz Adar, Nobel Prize-winning scientists and high-level government representatives from many countries.

They said about the Forum:

• “Together, we can create a world of true peace, a world in which everyone enjoys well-being, and everyone shares the fruits of this century. I believe that we can succeed in that.”

King Abdullah II of Jordan

• “We need to focus on the global challenges posed by changes in our world, and with enough cooperation we should be able to meet and overcome them.”

Hungarian President János Áder

• “Science at its core, acts as a force for positive transformation and development.”

Irina Bokova, Director-General of UNESCO

• “We believe that the use of science and knowledge is the most successful way to create opportunities, improve life, and broaden the horizons of minds and hearts.”

Princess Sumaya bint Al Hassan, President of the Royal Jordanian Society

Essential role

On the role played by the UNESCO-Sultan Qaboos Prize for Environmental Protection, Madiha Al-Shaibani said: «The Sultan Qaboos Prize for Environmental Protection has been instrumental in promoting environmental sustainability over the past 28 years. The Prize was awarded to leading global environmental organizations and scientists from all over the world, in recognition of their outstanding dedication and efforts to preserve the environment.

Congratulation

H.E. Dr. Al-Shaibani congratulated the National Parks Council of Singapore, which was selected by the Director-General of UNESCO, Irina Bokova, as the winner of the UNESCO-Sultan Qaboos Prize for Environmental Protection in 2017, in recognition of its significant contribution to the preservation of environment and its promotion to biodiversity conservation at urban areas through its work to restore and

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Al Shibaniah: The award has been instrumental in promoting environmental sustainability over the past 28 years

The Award Winners: While climate change continues to occupy the centre of attention as a major problem, this award underlines the importance of environmental management in cities

preserve rare environments and species and to support the inclusion of this diversity in all stages of the educational system, in addition to managing the World Heritage Site of Singapore's Botanical Gardens, 350 parks and four nature reserves.

The Winners of the Prize

For his part, Kenneth ER, CEO of the National Park Board of Singapore, said at the award ceremony: "It is an honor to have been invited to this distinguished gathering, to celebrate science, technology and innovation. of the National Park Board is Singapore's national agency responsible for the management of greenery and biodiversity conservation. We are very encouraged and honored to be named laureate for UNESCO -Sultan Qaboos Prize- As climate change continues to take centre stage as issue of our time, this award speaks to urgency and importance of environmental management in cities. I would like to thank UNESCO and the Sultanate of Oman for this gracious award."

Making the Change

The speakers called for the integration and motivation of young people to love science and provide incubator environments for their innovations. They called for inviting decision makers to benefit from science and technology in promoting sustainable food security in the world and the use of science to serve the population according to scientific principles in planning and sharing science, as well as non-monopoly.

Forum Themes

The four-day forum focused on the importance of this global scientific gathering to allow world scientists to rearrange their priorities to help in creating a global change and stressed the need to invest in data infrastructure to include wider regions of the world for lessening digital divide between nations.



Recommendations

- Participants stressed the importance of launching a «Regional Scientific Forum for the Arab World» to adopt regional initiatives aimed at enhancing cooperation among different scientific communities and building partnerships among them.

- They stressed that the sustainability of natural resources is necessary to avoid conflicts and promote sound development, especially that «the global demand for food, water and energy has reached unprecedented levels.»

- They called for the preservation of scientific competencies threatened by migration and stressed the importance of diversity as an important factor in the empowerment of science, technology, innovation and scientific excellence, through the adoption of methodologies, linguistics, life experiences and different cultural values.

- The participants affirmed their commitment to promote the right for all to participate in the promotion of science and the right to enjoy the benefits of scientific progress and its applications in compliance with the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights.

The World Science Forum focuses on the importance of allowing world scientists to rearrange their priorities to help in creating a global change

The Forum stressed that the sustainability of natural resources is necessary to avoid conflicts and promote safe development



Environmental Statistics – Oman

Ras Al Hadd Reserve attracted 51,745 turtles during 2016. The peak of attraction was in July last year, with arrival of 16,695 turtles. December was the least attraction months, with the arrival of 851 turtles, according to statistics released by the Ministry of Environment and Climate Affairs. The statistics also showed that the number of turtles that came to the Ras Al Hadd for laying eggs was about 46,014 plus 424 non-egg laying turtles. Within these numbers, 14,713 turtles bearing numbers, which means that those turtles had previously come to the same site, while A total of 47,336 turtles were present for the first time. Also, about 831 dead turtles reached the shores of the reserve.

On the other hand, the statistics showed a decrease in the number of visitors to the Reserve of Al-Dimanyat

Islands in 2016 which witnessed 4136 visitors, with a decrease of 3,061 compared with the number of the same period in the year 2015 which witnessed 7,197 visitors. Al-Dimanyat Reserve is one of reserves that have pristine nature. It provides many natural habitats that attract turtles and birds. In addition, the water there beautiful contains coral reefs and other elements of natural life that attract divers. On another aspect, during 2016, the Ministry of Environment and Climate Affairs issued about 86 licenses for companies of first and second categories with an increase of two companies from 2015. As well, the Ministry issued 1,188 licenses for the use, transport, import, export and re-export of radioactive materials for medical, commercial and industrial purposes.



Qatar Green Building Conference

The third edition of Qatar Green Building Conference kicked off. The conference brings together industry leaders to highlight innovative solutions to the environmental challenges in Qatar and the region. The conference includes a series of three-pronged sessions to discuss: Sustainable Future Cities, Towards a Sustainable Economy And Sustainability as a Style of life.

University of Bahrain Launches PhD Program in Environment and Sustainable Development

The University of Bahrain announced the launch of the PhD program in Environment and Sustainable Development next semester, in cooperation with the United Nations. The University President Dr Riyadh Hamza noted that the program, the first of its kind in the Gulf, aims at achieving the 17 UN Development Goals, in addition to preparing environmental experts capable of making decisions and managing environmental projects. Previously, the University Council discussed the speech of the Dean of Graduate Studies and Scientific Research College about the Council of Graduate Studies and approved the PhD program in Environment and Sustainable Development.

Saudi Arabia to Launch Its Largest Solar Power Plant

Saudi Arabia will soon launch the first stage of Dhuba Al Khadraa plant which will be the largest power generation project in the country, at a cost of 4.5 billion Riyals (\$ 1.2 billion). According to a statement issued yesterday, the project «Dhuba Al Khadra», which the operation of its stages is expected to be completed after nine months, is characterized by the feature of making the solar system to integrate with the other units. Gas condensers will be used as an alternative fuel to contribute in reducing the consumption of equivalent fuel with production capacity of more than 605 MW, including 50 MW renewable energy. This will make Tabuk a gateway for exporting electric power to the world after the implementation of the connection system of high reliability electrical voltage, which will allow the project to benefit from the link between the north-west and north-east areas.



Kuwait Handed Over 20 Smuggled Iraqi Falcons to Baghdad

The Director of the Department of Conservation of Biodiversity At the General Authority for the Environment in Kuwait, Dr. Abdullah Zaidan, said that the Ministry of Environment in Iraq has handed over 23 falcons of different types, 4 of the free type and the rest of the type Shaheen, and three falcons died as a result of fatigue. After the handover, Dr. Zaidan explained that, according to a letter from the Customs Department at the port of Abdali last week.

UAE Sets a Record in Low PV Prices

The UAE Minister of Climate Change and Environment H.E Thani Ahmed Azzuwaidi confirmed that his country has cut solar energy prices three times over the past two years in Abu Dhabi and Dubai, pointing out that renewable energy sources have economic benefits as well as environmental benefits. «We have achieved a world record in low Photovoltaic Power (PV) prices by offering a tender for a 350 megawatt photovoltaic project, which attracted a bid of 2.42 cents per kWh. This confirms again that renewable energy sources have economic benefits as well as environmental benefits.

Due to Decline in Insects Numbers .. A Disaster May Affect the Earth's Ecosystem

A recent study shows a decline in the number of flying insects in the terrestrial ecosystem, by 75 percent over the past 27 years. Scientists see such figures as «catastrophic». Environmental experts consider flying insects as an irreplaceable element. They believe that such insects play an important role in completing plant pollination and thus completing crops, plus, they are food for hundreds of other animal species. The results of the study, published in the scientific newspaper "PLOS ONE" and highlighted by the London-based newspaper "The Guardian", have prompted scientists to speculate about a «catastrophe» that can have a serious impact on human societies. The study did not examine the causes of this huge decline in insects'

numbers, but some scientists think it is due to the erosion of natural vegetation cover, human invasion of forests and excessive use of pesticides, as well as the climate change. «The fact that the numbers of flying insects have fallen by this high rate, is really a warning bell,» said research leader Hans de Krone of the University of Radboud. «Insects represent about two-thirds of the earth's organisms, but there have been alarming declines in the numbers of some species,» said study co-author, Professor Dev Golson of the University of Sussex in Britain. «We are making vast areas of land repulsive to most forms of life, and now we are heading for an environmental disaster. If we lose insects, everything will be broken.» added Professor Dev Golson.


Environmental Vocabulary

The jewel of the desert

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By its beautiful eyes attracted lovers, and inspired the poets. The singers sing with its beauty. Is it a Queen from Jinn or a Fairy of Paradise!. They passed its beauty in tongues and were authenticated by the ears before the eyes. People were not usually seen it between ways and roads, because it is inhabited the desert and the wilderness.

It is full of body, graceful textures, weighs about one hundred and thirty kilograms, and has a length of about one hundred and seventy centimeters. It has two long and sharp horns, each about 70 centimeters long, those for males longer, while females are smaller. In spite of the beauty of the desert, it adds another beauty to the beauty. When the sun sheds its rays on its snowy skin, the reflection make a singe of its presence in the desert after being hidden and mixed with the color of the desert.

The Arabian Oryx live adaptive to the harshness of the desert, where they can dispense with water for long periods of time. They move from place to another in long-distance flocks seeking water and grass, and when they are tired, they search for the nearest tree to rest under its shadow. The female gives birth to her first baby after twenty two months of its birth. The pregnancy period takes between eight and nine months. Each individual can add a new baby to the herd every year along her entire life span of up to 19 years.

Fifty years ago, the Arabian Oryx, (locally known as Ibn Sola), spread in the desert of the Arabian peninsula, and existed in the desert of the central province of Oman. In the early 1970s particularly 1972, the Omani environment farewell the last herd of the Arabian Oryx due to illegal hunting, and the desert missed the Jewel that spreads its beauty every sunrise .

His Majesty The Sultan of Oman realized the importance of the loss of the Omani environment from precious treasure. His Majesty ordered the launch of the project to resettle the Arabian Oryx in its native habitat in the desert of the Governorate of Al Wusta.. The first batch arrived in 1980 at the breeding centre in Wadi Ja'aloni and named as (The Arabian Oryx Sanctuary). The Arabian Oryx breeding project was successful in breeding and releasing it in the wild. This Sanctuary then listed in the World Heritage List by UNESCO.

Efforts continue to accelerate with the acceleration of the numbers of the Arabian Oryx. So the desert recovered its jewel, and the Omani environment restored the treasure. The Arabian Oryx, the mythical symbol in the epics of poetry and literature, has transferred to us through manuscripts and books. The Arabian Oryx remains immortal in the hearts of the faithful, a jewel not scratched by the factors of death. It is a really deserves to be the jewel of the desert

Sea-level Rise Due to Global Warming is Worse Than Expected

A study by Australian researchers found that sea level rise due to global warming would exceed 1.3 meters by the end of this century unless serious arrangements are made to address climate change. The Intergovernmental Panel on Climate Change (IPCC) has predicted that the increase in sea level would be 85 centimeters, far below the results of the new study, which took into account the contribution of socioeconomic factors to the increase in greenhouse gas emissions, such as energy demand and generation, growth

of population, and high GDP. The study, published in the "Environmental Research Letters" Periodical, showed that the sea level will rise by 50 cm by 2100 in the best case. That means, the question of coastal areas adapting with rising sea levels is inevitable. In order to achieve this scenario, the commitment to Paris Convention is a must. The Convention requires international action to maintain the Earth's temperature and keep it well less than 2 ° C above the pre-Industrial Renaissance level and the exclusion of coal as an energy source by 2050.



Levels of Carbon Dioxide Increased at a Record Pace in 2016

The United Nations said that the amount of carbon dioxide in the atmosphere recorded last year a level that is not seen in the earth since millions of years ago and that probably contributed to the sea level rise by 20 meters and the temperature rise by three degrees Celsius. The United Nations' World Meteorological Organization (WMO) said in its annual publication on greenhouse gases, that the concentration of carbon dioxide in the atmosphere now is 403.3 ppm, compared to 400 ppm in 2015. Carbon dioxide is the largest anthropogenic source of greenhouse gases.

A \$ 1 Billion Oil Fund for Fighting Climate Change Chooses its Investments

A \$ 1 billion fund set up by major energy companies to fight climate change, has announced the first three investments and said two new members may be ready to join it. The oil and gas initiative on climate was launched last year and includes Saudi Aramco and Royal Dutch Shell. Pratima Rangarajan, the initiative's chief executive, said that she expects more companies to join and that Brazilian Petrobras and Abu Dhabi National Oil Company (ADNOC) are among interested companies. Other participants include BP, Total, Eni, Repsol, Statoil, Pemex and Reliance Industries.

The Sooty Falcon



Design: Marwa al.Ghafri



Don't you know that bird? It is the Sooty Falcon.

Father, look at that bird which is flying over us.

Yes, I know it father, and I know that it is a medium-size bird, belong to the birds of prey and the Falcons family. It is characterized by its small size and strange color, mixed between dark brown and black.

And what more, do you know about this Falcon?

I know it is an immigrant bird. It spend the winter season in East Africa and the island of Madagascar. During the summer season, it comes to the Arabian Gulf Islands, the Sea of Oman and the Red Sea. Al-Dimaniyat Islands and Al-Fahl Island are considered as the most common places in the Sultanate where the falcon is nested. The falcon reaches the breeding areas in late April and early May and begins laying eggs in early August. Usually it lays two to four eggs and begins to migrate to Africa in November. The Sooty Falcon feeds on small birds and on large insects such as desert locusts.

God bless you. You know a lot about it, but you do not know that this beautiful bird is endangered. The latest statistics show that the number of the Sooty Falcon in the world is decreasing significantly. It lives on the islands and cliffs in the Sultanate during a sensitive period of his life cycle, the breeding cycle, the Sultanate is studying and investigating the life of this bird, in order to collect environmental information about the it. Such information can be used to develop plans and programs for maintaining and protecting this bird. The graphs show that the number of nests (The nesting couples) in a continuous gradual decrease in both, Al-Dimaniyat Islands and Sawadi Islands, but number of nests is stable at Al-Fahl island. Haman activities at the breeding areas is considered as one of the most important reasons for the decreasing in the number of the Sooty Falcon.

