



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



Sultanate of Oman
Diwan of Royal Court

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Issue 60



The Environmental Dimension in Oman Vision 2040





The Board of Directors of the Environment Authority reviews the 2021 action plan

The first meeting of the Board of Directors of the Environment Authority was held in the Authority's headquarters, headed by His Excellency Dr. Khalfan bin Saeed Al Shuaili, Chairman of the Board, and in the presence of the members of the Board of Directors. The meeting began with an explanatory introduction about the Authority, presented by His Excellency Dr. Abdullah bin Ali Al-Omari, Head of the Environment Authority. The meeting also witnessed a representation of the vision and mission of the Authority, plus other visual presentations by the General Directors at the Authority on the main achievements, challenges and solutions for the main administrative sectors of the Authority. The meeting also reviewed, the Authority's work plan and goals that it seeks to achieve during the next year (2021), as well as the annual financial budget for the next year. The meeting was attended by the Authority's Chairman of the Board, the Head of the Authority and the members of the Board of Directors, namely Eng. Ahmed bin Hassan bin Alawi Al Theeb

Ba Omar, Vice President of the General Authority for Special Economic Zones and Free Zones, His Excellency Engineer Salem bin Nasser bin Saeed Al-Awfi, Undersecretary of the Ministry of Energy and Minerals, and His Excellency Engineer Ali bin Muhammad bin Zahir Al-Abri, Undersecretary of the Minister of Agricultural and Fisheries Wealth and Water Resource. The meeting was also attended by His Excellency Dr. Nasser bin Rashid bin Abdullah Al-Maawali, Undersecretary of the Ministry of Economy, Her Excellency Aseela bint Salem bin Suleiman Al-Samsamiyeh, Undersecretary of the Ministry of Commerce and Industry for Investment Promotion, and His Excellency Dr. Mohammed bin Nasser bin Ali Al Zaabi, Chairman of the Civil Aviation Authority, His Excellency Khalifa bin AlMirdas bin Ahmed Al Busaidi, Secretary General of Governorates Affairs at the Ministry of Interior, and His Excellency Reda bin Jumah All Saleh, Chairman of the Board of Directors at the Oman Chamber of Commerce and Industry.



point of view

Your Majesty .. You Planted and Honored

Dr. Dawood Sulaiman Al Balushi
Editor-in-Chief

The generous gesture of His Majesty, Haitham bin Tariq, may God protect him - of planting a frankincense tree at the Razat Royal farm in Salalah, Dhofar Governorate, is a clear indication of His Majesty's direct interest in the Omani environment and the preservation of its natural resources to ensure its sustainability. It is a clear approach for the State agencies in all sectors to pay attention to the vegetation cover, especially the Omani wild trees because of their historical, cultural and environmental connotations throughout the original Omani history.

Your Majesty, You Honored the Omani Environment by Planting that Tree and you drew for us a clear path for taking care of our environment, following the approach of the late Sultan Qaboos bin Said - may God have mercy on him - who received the praise of all international environmental organizations. His international and local efforts in caring for and defending the environment and encouraging scientists, researchers and environmental activists to take for all elements of the natural life is praised at the global level.

The environmental dimension also came as one of the main axes of the Oman 2040 Vision that you directly chaired, and it was considered as an important national priority in implementing all the strategic and developmental plans for the country in accordance with clear-cut goals that elevate Oman to a bright and prosperous present. This indicates your Majesty's direct keenness, in sightful vision and good directives for the preservation of the Omani environmental system, as it is closely related to daily life and the advancement of society to the best levels.

The Sultanate lives these days the joy of celebrating the Glorious National Day on November 18th (2020). We show all the sensations of friendliness, brotherhood and loyalty to your Majesty, for you are the best successor to the best predecessor. You are the best choice of the late Sultan Qaboos bin Said. So, we were pleased with your advent, and the Sultanate will pass through your era, carrying the flags of peace and love in all the poles of the earth. Oman will go through a happy new era that draws with it progress, advancement and the prosperity for society in all fields.

We pledge to God - the Almighty - and pledge to Your Majesty to be the bastion of Oman, defend its soil, defend its history, culture and civilization to work for the advancement of the nation, and to preserve and protect Oman's environment to the best, and to achieve environment development and sustainability.

The Sultanate Advanced up 6 Places in the Environmental Performance Index

The Sultanate has advanced 6 places in the Environmental Performance Index for 2020 issued by the American University of Yale, to reach the 110th position globally in this year's index, compared to the 116th place in the 2018 Index. The Sultanate also ranked 50th globally in the household solid waste management sub-index, the 96th place in the air quality index, the 57th globally in the drinking water and sanitation quality index, the second place globally in the habitat preservation index, and the seventh place globally in the biodiversity index. The Environmental Performance Index 2020 includes 32

environmental indicators, 12 of which are used for the first time and cover 11 environmental fields. The indicator sheds light on the uses of natural resources and the ability of these resources to provide the necessary services, not just in matters related to pollution. This year's Environmental Performance Index ranks 180 countries based on a number of indicators that provide a nationwide measure of how to rank the countries which are close to the fixed environmental policy goals, the matter that provides a mechanism to highlights the leading countries in environmental performance and best practices.

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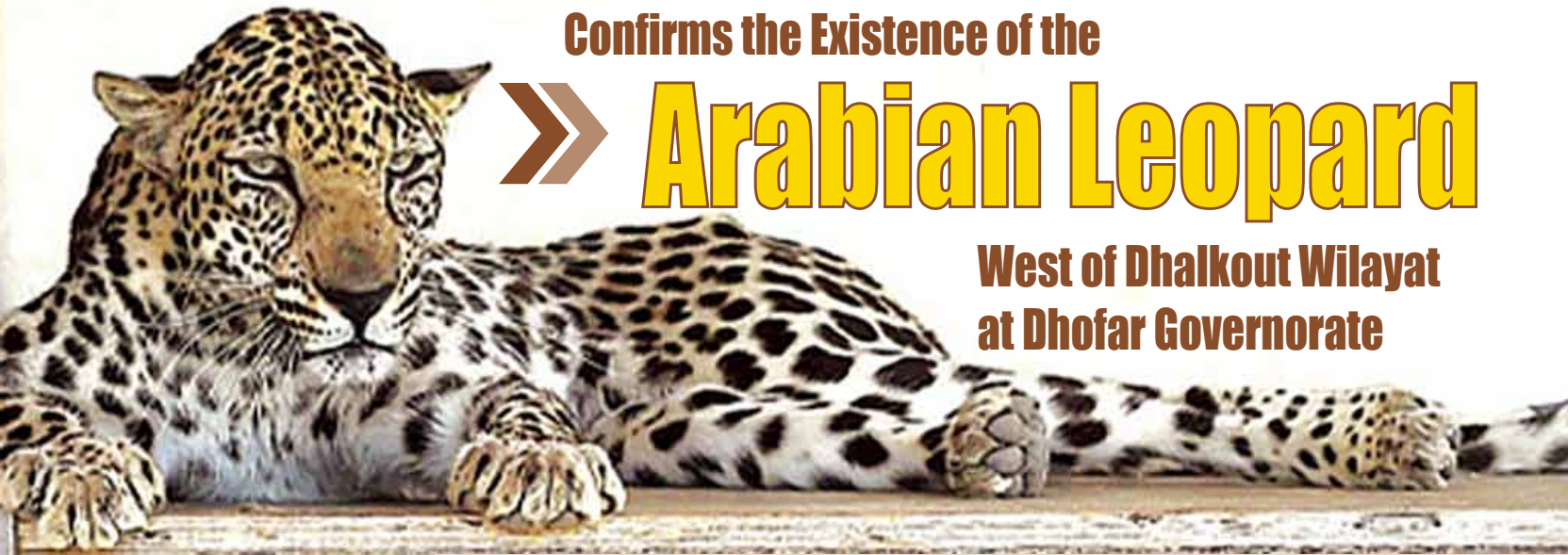
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The Office for Conservation of Environment Confirms the Existence of the

» Arabian Leopard

West of Dhalkout Wilayat at Dhofar Governorate



■ ■ ■
The results of a new study confirmed the observation and documentation of other rare types of wild mammals

■ ■ ■
This study is considered the first scientific documentation of these rare species in the region

■ ■ ■
The study revealed the existence of eight species of wild mammals inhabiting the region, which are the Arabian wolf, porcupine, baboon, lynx, striped hyena, honey badger, mongoose and rock hyrax

■ ■ ■
These documented species have important roles in the ecosystem, and they represent at least 17% of the terrestrial land mammals registered in the Sultanate

A recent environmental study carried out by the Office for Conservation of Environment at the Diwan of the Royal Court, represented by the Department of Environmental Affairs in Salalah, during the current year 2020, revealed a new scientific registration confirming the existence of the Arabian Leopard in the area west



of Dhalkout Wilayat in Dhofar Governorate. The Office previously carried out some field studies in the region, but it did not record any indications of the presence of the Arabian Leopard in the west of the Wilayat, despite the fact that the

people reported the existence of this rare animal. The results of the new study also revealed the monitoring and documentation of other rare types of wild mammals.

Commenting on this study, Dr. Hadi bin Muslim Al Hakmani, Director of the Environmental Affairs Department at the Office for Conservation of Environment at Salalah, stated that the environmental study area falls within the zone of the Arabian Leopard existence at the mountains of the Dhofar Governorate. Some studies and intermittent field surveys have been conducted in the past, but such initial studies did not document indications of the presence of the Arabian Leopard despite the availability of the natural habitats such as prey and mountainous terrain which are important for Leopards' movement.

That is why the researchers of the Environmental Affairs Department at the Office for Conservation of Environment at Dhofar Governorate conducted this year a new environmental study and comprehensive scientific and methodological field surveys in a number of mountainous areas located west of Dhalkout to verify the presence of the Arabian Leopard and to document other wild mammals living in the region.

"Due to the ruggedness of the region, the difficulty of moving and the living system of the Arabian Leopard and other wild animals, environmental researchers have used a number of modern techniques that have proven effective in studying rare species that are difficult to study in direct ways. Most notable of such modern techniques, are camera trap, and surveys of monuments, in addition to collecting samples of predator droppings to do future genetic analyzes to find out the source of these samples", said Al-Hakmani, speaking about the methods used in the study.

"We strive to conduct the study

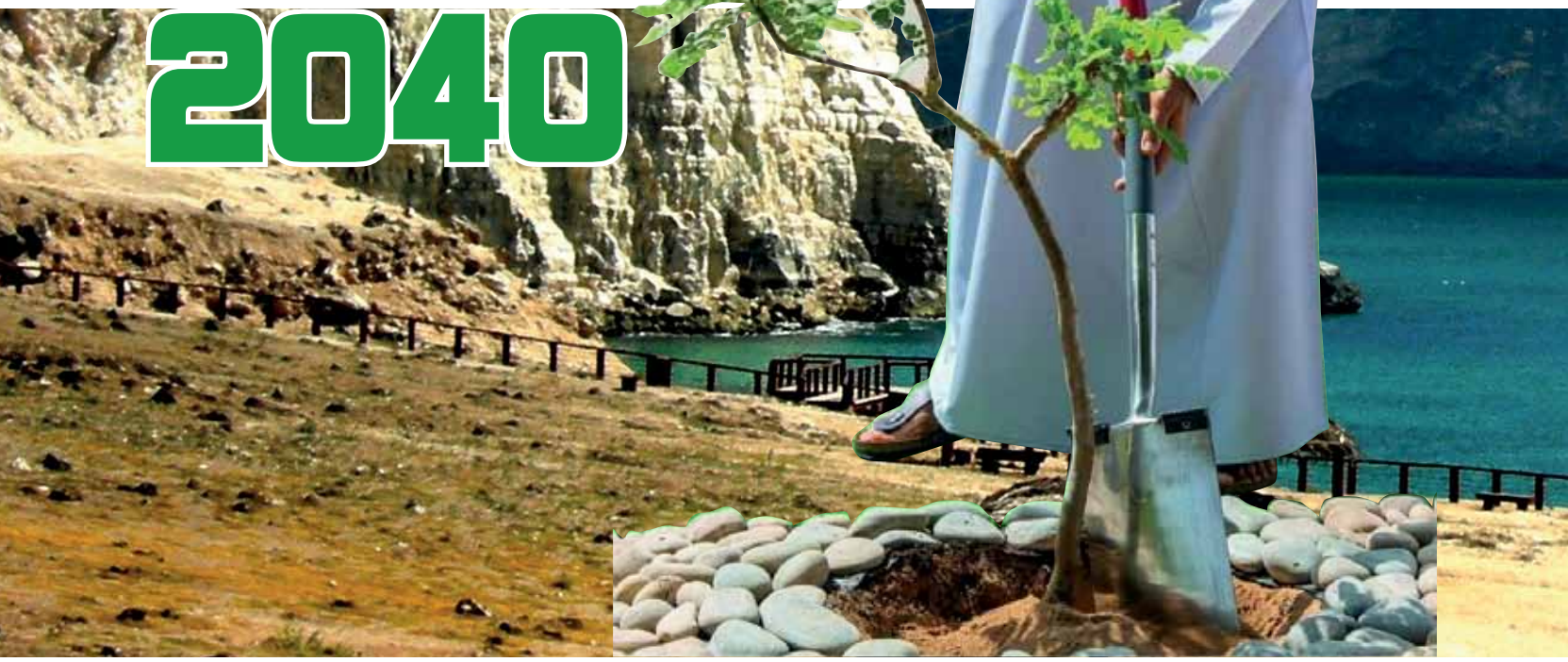
in a comprehensive scientific way. So we divided the area allocated for the implementation of the study in the western state of Dhalkout, into about 60 squares (the area of each square is 1 sq. km). After that, we came to know the most important trails of wild animals. For this purpose, approximately 17 camera trap were installed for a period of 80 days. After that those cameras were collected and the data they contained was sorted and analyzed" added Al-Hakmani referring to the followed work mechanisms.

With regard to the results of the study, Al-Hakmani said that, the results of the new environmental study confirmed the presence of the Arabian Leopard at the west of Dhalkout Wilayat in the Dhofar Governorate. As well, it has been confirmed that the Leopard was spotted in two different locations. This study is considered the first scientific documentation of this rare species in the region. The study also revealed to us the existence of eight species of wild mammals inhabiting the region, which are as follows, according to their relative density indicators: the Arabian wolf, porcupine, baboon, lynx, striped hyena, honey badger, mongoose, and rock hyrax.

Al-Hakmani emphasized that these documented species have important roles in the ecosystem and represent at least 17% of the terrestrial land mammals registered in the Sultanate. These results indicate the biological diversity in the study area and its environmental importance, especially with its incubation of a number of wild mammals that are considered threatened or vulnerable to extinction according to the classification of the International Union for Conservation of Nature (IUCN). So, such achieved results, prompt us to make great efforts in protecting the study area and tightening environmental control therein in order to preserve the ecological diversity there.



The Environmental Dimension in Oman Vision 2040



» **Muscat – November:**

The environment receives special attention from His Majesty Sultan Haitham bin Tariq - may God protect him. His Majesty embodied this concern by planting the frankincense tree with his generous hands at the Razat Royal farm in Salalah. This generous gesture from His Majesty comes from his wise vision to encourage all members of society to plant trees and preserve the environment. His Majesty also embodied his concern for the environment when He presided over the Oman Vision 2040, which places the environment as a national priority that everyone must preserve and take care of.

The Goals of Oman Environmental Vision 2040

Oman Vision 2040 has set its sights on a number of goals and the implementation mechanism for such goals in order to achieve environmental sustainability and advance it to the highest levels. The first one of these goals is to achieve a balance between environmental, economic and social requirements, bearing in mind the rules of the sustainable development. This goal should be achieved by expanding environmental awareness programs and creating the necessary legislation that organize the environmental awareness programs to preserve the environment and environment sustainability. The environment and sustainability are associated with the work of many industries and various sectors. So it is very important to achieve a balance between the requirements of the economy and the principles of preserving the environment.

The second goal focused on making the environmental surroundings of high quality and pollution-free by tightening the rules that control over all sources of pollution, be that air, water, radiological and thermal pollution, developing such control mechanisms, and launching an innovative national community program in accordance with the policies of motivation for the best uses that lead to reducing life's pollutants. The third goal emphasizes the achievement of food and water security, based on renewable resources and advanced technologies plus the optimization of the strategic location and biodiversity of the Sultanate to enhance food security in accordance with the competitive advantages in a way goes in line with the local production capabilities as well as providing incentives conditional on improving productivity in this area. The fourth goal is to realize the sustainable use of natural resources and wealth and to invest in them, in ways that ensure high added value. Among the goals also the creation of a variety of renewable energy sources and rationalizing energy consumption in order to achieve energy security. This can be achieved by developing policies and regulations concerned with encouraging the private sector and civil society to invest in the renewable energy and adopting governmental investment policies in

the natural capital to help achieve energy security. Also, one of the goals is the creation of a green and circular economy that responds to the national needs and conforms to the global trend by adopting general principles of green economy agreed upon by all parties, including governmental and private sector institutions, in addition to civil society institutions. This can be achieved through the application and stimulation of measures that contribute to the sustainability of the environment. Another objective of Oman 2040 Vision is centered on achieving environmental awareness associated with the effective implementation of the rules of sustainable consumption and production, through restructuring the financial sector, to encourage the agricultural sector, expanding water resources and encourage the use of modern and advanced technologies that aim to reduce production costs and apply the principle of economies of scale.

Strategic Direction

The strategic direction of Oman 2040 Vision is based on effective, balanced and resilient ecosystems to protect the environment and sustain its natural resources in support of the national economy. This future direction is based on the fact that the optimal use and sustainability of natural resources is a necessity to support the economic environment and stimulate it to production. The future strategy in the field of natural resource management, the Vision will focus on developing non-traditional sources of natural resources, such as the use of various types of renewable energy that contribute to reducing costs on the productive sectors and enhancing their competition, in addition to adopting a transformation approach towards a green economy that enhances the issue of environmental sustainability, contribute to achieving stability, reducing restrictions and pressures on the financial management, and supplying the treasury with financing sources through non-traditional natural sources. In the field of natural resource management, the achieving a balance between development requirements and environmental sustainability is a national priority. There is also an urgent need for structural reform in the water sector, by raising water efficiency, expanding sanitation





His Majesty embodied his concern for the environment by presiding over Oman Vision 2040, which places the environment as a national priority that everyone must protect and take care of

■ **Part of the Oman 2040 Vision goals is to achieve a balance between environmental, economic and social requirements, working with the rules of sustainable development and high-quality, pollution-free environmental means, and achieving food and water security based on renewable resources**

■ **The strategic direction of Oman 2040 vision is based on effective, balanced and resilient ecosystems to protect the environment and sustain its natural resources in support of the national economy. The Sultanate represents a model in terms of the balance between development and the environment, as it is evident in its commitments to international agreements and international cooperation related to the environment**

Challenges and Response

Oman Vision 2040 reviewed a number of challenges, including limiting the follow-up of environmental conservation to a specific institution, without consideration to the fact that the field of the environment is shared by all other sectors, in addition to the presence of a negative visualization for environmental protection as an obstacle to development, as the Sultanate strives for concern for the environment to be a firm culture of the citizens and various institutions, in addition to the absence of a national environmental database as a necessary infrastructure to support decision-making, policy-making, the monitoring, follow-up and evaluation process. The driving forces and pressures affecting the environment in the Sultanate are represented by population growth, economic growth, and energy demand. The high population and economic growth have exerted severe pressure on the area of cultivable land in the Sultanate. In the field of energy, energy production is totally focused on fossil fuels (oil and gas), and most of the final use of the energy sector is concentrated in generating electricity and transportation. In the field of water resources, the Sultanate is considered one of the countries that suffer from scarcity of water resources because it is located in the range of dry areas, which are characterized by the instability of the water situation and the scarcity of rainfall. In addition to the phenomenon of deteriorating groundwater quality is one of the pressures and challenges facing the water resources sector as a result of the high salinity of the groundwater in the coastal parts, due to pollution of the groundwater. The phenomenon of desertification has also grown in the Sultanate during the past two decades, and the marine environment is also exposed to the problem of illegal discharging of oils from ships and trans-carriers of regional waters, and the extension of these pollutants to the beaches. Unattended fishing leads to the destruction of coral reefs and depletion of fish stocks. These activities also cause the death of numbers of rare sea turtles, whales and dolphins. As well, the growth of commercial marine fishing has environmental impacts. Among such challenges, there are overgrazing and air pollutants. The response to these challenges is represented by a set of legislations, programs and initiatives, including updating the national plan to combat oil pollution, the national program for monitoring pollutants in the marine environment, monitoring the development of fish stocks, the mangrove cultivation project, monitoring the water situation, the national strategy for improving natural pastures, and developing policies encouraging investment in projects for the production of food commodities, the project of additional support for the national strategy and the biodiversity action plan, strengthening the air quality monitoring network, and reducing the depleting gas emissions of the ozone layer. Concern for the environment, still remains at the forefront of the priorities of the new era under the leadership of the beloved Leader, His Majesty Haitham bin Tariq - may God preserve and protect him - as an innovator and developer for the environment with a professional balance between requirements and needs.

services and using modern technology to take advantage of wastewater to use it in various fields such as agriculture and others, aiming at increasing and diversification of agricultural production based on modern technology methods that lead to favorable levels of food security, as well as gradually starting to manufacture the materials, instead of exporting them as raw materials; to enhance the local added value and build technical capabilities in this field, which also contributes to diversifying sources of income and strengthening the Sultanate economically.

The opportunity in making environmental advantages and biodiversity a source of growth, can be achieved by attracting tourism and promoting distinct types of ecotourism that provide additional income, as well as they are consistent with the principle of sustainability and preserving the gains of development and the rights of future generations. The future will also have a wide scope for improving and developing performance in terms of utilizing resources, improving utilization efficiency, as well as the need to incorporate the principle of permanence in policy-making, that is, relying on effective action on the rules of sustainable consumption and production. A clear strategy that promotes the concept of environmental sustainability will be followed. This will become an input into all public policies and those that regulate the work of the sector to achieve the goals of Oman 2040 Vision.

The Current Situation

As far as the environment and natural resources are concerned, Oman 2040 Vision reviewed the fact that the Sultanate is a model in terms of the balance between development and the environment. That is

evident in the Sultanate commitments to international agreements and international cooperation related to the environment. The Sultanate has committed itself to the agreements emanating from the 1992 Rio Conference on Environment and Sustainable Development, in addition to the United Nations Convention to Combat Desertification, the Convention on Biological Diversity and the United Nations Emergency Convention on Climate Change. The Sultanate is also keen to pay attention to various environmental issues, the most important of which are combating desertification, drought, pollution of air, water and soil, waste and chemicals management, combating pollution of the marine environment, protecting wildlife and their natural environments, preserving natural resources and achieving energy security in terms of supply and demand.

The Vision has identified the current situation in the Sultanate as it has made unremitting efforts to ensure that natural resources are protected and used in a safe and sound manner, that people are protected from harmful environmental impacts, and that the environment is effectively managed in a way that supports the prosperity of society. The vision has ensured that the concern for the environment is a well-established culture of the citizens and institutions, and that the environmental perspective and environmental considerations are included when setting policies, decision-making, planning and industrial implementation, within an efficient and effective legislative and regulatory framework that facilitates environmental monitoring and follow-up and leads to a sustainable environment.



» “Amana” Launches its First Projects to Invest in Solar Energy for Mosques

“Amana” for the Management of Endowment Funds and Institutions, launched its first investment project for changing the mosques into environmentally friendly green buildings, powered by solar energy for consumption and production of the surplus. This came through the signing of «Amana» agreement to convert one mosque in the Sultanate in cooperation with one of the small and medium enterprises specialized in this field. This initiative comes as an important and strategic direction in opening new outlets for investments of the endowment projects by engaging in quality projects that achieve social and environmental benefits and have a

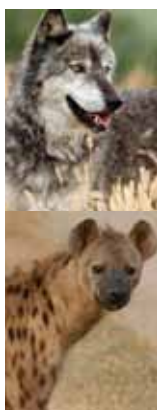
profitable return for the endowment. This initiative is one of the pillars of Amanah's investment strategy by creating quality projects with a social and economic impact to provide promising quality job opportunities for Omani youth. Eng. Yusuf bin Ali Al-Harithi, CEO of Amanah, said that, this initiative comes in line with Oman 2040 Vision and the global trend towards creating green buildings, which creates modern industries based on technology and innovation. He added that, the Sultanate, by virtue of its strategic location, the nature of its climate and the brightness of its sun most of the year, provides a great opportunity to benefit from this sustainable solar energy.



Saudi Arabia

Allowing Hunting According to the Wildlife Regulations

The Ministry of Environment, Water and Agriculture, represented by the National Center for Wildlife Development, and out of its keenness to implement regulations and laws that preserve wildlife, announced that it would allow the practice of hunting hobby as of 15 / 3 / 1442H corresponding to 1 / 11 / 2020, until 1 / 6 / 1442H corresponding to 14 / 1 / 2021. In this context, the Ministry requested that several considerations to be taken into account to carry out the hunting process, including the prohibition of hunting the Arabian oryx, Arabian Tahr, ibex, and predators such as (the Arabian leopard, lynx, wolf, hyena, and other endangered animals and birds, and raptors). The hunting must be limited to air weapons licensed in the name of



their user. Only hunting by traditional methods such as falcons and poaching dogs is allowed, noting that it is forbidden to use any other means that lead to the hunt of more than one animal or bird, whether with spray guns such as shotguns, fishing nets, or hunting in unauthorized ways such as: using gases, car exhaust, or drowning with water or the use of attraction and calling and others.

UAE

The UAE Joins the Global Ocean Alliance

The United Arab Emirates has joined the Global Oceans Alliance launched by the United Kingdom with the aim of enhancing the protection of the oceans and the marine environment globally from the pressures they face such as pollution, climate change and overfishing because of the economic and environmental value of high importance they represent for the sustainability of the planet earth. The Alliance

consists of 32 member states, and calls as part of its strategy for the protection of at least 30% of the oceans around the world by 2030. This has been achieved by expanding marine protected areas. It is worth noting that the UAE is the first country to join the Alliance in the Middle East Region. According to the goals of the Alliance, a protection rate of up to 10% of the world's oceans must be achieved by the end of this year.

KUWAIT

«Hafidh Ala Alyal» Campaign for Cleanup the Beaches from Waste

Believing in the effective societal role of community initiatives, the Kuwait Oil Company launched the campaign (#Hafidh_ Ala_ Alyal), in which a team from the company was present in the Jahra Reserve, in order to clean the

beaches from waste and garbage and to protect them from unfair behaviors. This initiative aims to raise awareness among the community about the need to protect and conserve the natural environment and support the integrity of the ecosystem in Kuwait.

Qatar

An Awareness Campaign and Competition to Clean up Bin Ghannam Island to Promote Ecotourism

The Public Relations Department at the Ministry of Municipality and Environment, represented by the Awareness section, in cooperation with the Public Hygiene Department and the (Arrange You Tours) Company organized an awareness campaign and competition to

clean Bin Ghannam Island and its surrounding mangrove trees, within the framework of activating community partnership, promoting local ecotourism and opening new horizons for investment in the field of environmental tourism and sustainable development promotion.

Bahrain

The Representatives Council Discusses the New Environmental Law

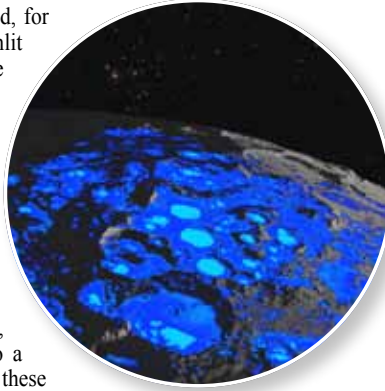
The Representatives Council discussed the draft environmental law referred to the Council by the government. This new legislation establishes an integrated legislative organization regarding the environment. The legislation includes all forms of environment at land, marine and air. It is also in line with the international agreements

to which the Kingdom of Bahrain has acceded, ratified or not ratified yet. The draft environment law is considered an important step for preserving, protecting and sustaining the environment, as it aims to regulate the provisions for chemicals and hazardous materials that are circulated or prohibit their circulation for their effects on the environment.



» NASA: Presence of Water on the Sunlit Moon Surface

WASHINGTON - Agencies: The US Space Agency «NASA» announced a discovery, the first of its kind, on the surface of the Moon, which would be one of the most important incentives for building human colonies in space. NASA's Stratosphere Observatory for Infrared Astronomy has confirmed, for the first time, the presence of water on the surface of the moonlit with sunlight, in an indication that water can be distributed more than expected on the surface of the moon, and is not limited to only the dark part of it. The observatory discovered water particles (H₂O) in an area called «Clavius Crater», which is one of the largest craters visible from Earth, which is located in the southern hemisphere of the moon, according to the official website of «NASA». Previous observations of the moon's surface had revealed a form of hydrogen, but they could not distinguish between water and its close chemical ratio, hydroxyl. But the new data reveal the presence of water in concentrations ranging from 100 to 412 parts per million, equivalent to roughly a 12-ounce bottle of water, confined to a cubic meter of soil spread across the surface of the moon, and these results were published in the latest issue of the scientific journal «Nature».



» Evacuation of a «Killer Wasps» from a Tree in Washington Threatening Honeybees

WASHINGTON - Reuters: A team of entomologists wearing protective clothing evacuated giant Asian wasps from a tree in Washington State with a vacuum cleaner to destroy the first nest of so-called killer wasps found in the United States. The Washington State Department of Agriculture said it had been searching for weeks for those wasps that attack honey bee hives and could pose a threat to humans because they may sting repeatedly with a venom stronger than honey bees. The entomologists in the State found the nest near the city of Blaine, near the Canadian border, and returned with protective suits and gloves to conduct the extraction. The length of this stinging wasp, which is the largest in the world, can be between four and six centimeters. Southeast Asia, China and Taiwan are its original home. A Blaine homeowner first discovered these wasps in the United States in December. Officials said that regardless of the danger to humans, these wasps pose a threat to agriculture and the beekeeping industry because they are insects known to devour honey bees, as a few wasps can kill an entire hive within hours.



» Arctic Ice is at its Lowest Level on October

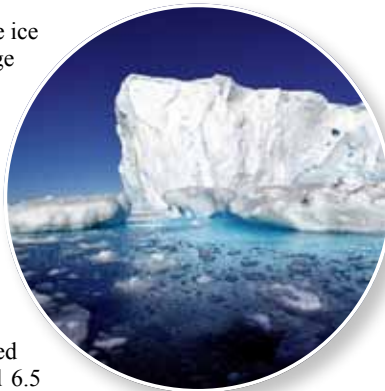
Copenhagen - ONA: Ice has receded in the North Polar Region on last October to reach its lowest level for such a month of the year, according to data released by the Danish Meteorological Institute.

According to the French Press Agency, this retreat in the ice is a new evidence of the consequences of climate change affecting this region of the world, which is classified as one of the regions most affected by high temperatures.

Since the 1990s, the Arctic has been warming twice as fast as the rest of the planet, and air, ice and water are interacting in a vicious circle due to warming.

Rasmus Tonboe, an expert at the Danish Meteorological Institute, said that the area of the ice floe in the Arctic region in October will be the smallest ever, and the growth rate of the ice floe is slower than normal.

Preliminary data used by the institute, after being collected by satellite, showed that the area of the ice floe reached 6.5 million square kilometers on 27 October.



Environmental Vocabulary

The Gluttony

Eng. Khalifa Badawi Al Higgi
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It gathered the luxury from its both name and taste. Tops the list of dining tables because of its benefits. It gained a widespread of seafood due to its unique taste, soft meat and distinctive flavor, rich in protein and omega 3, poor in fat and cholesterol-free. This may be one of the reasons for its reputed, high demand and high price, as the human soul is so attracted to which satiates its cravings of healthy, delicious and flavored food.

It lives alone among the rocks and in the sea caves and takes the shipwrecks and marine installations as a safe haven, using them to hide and satisfy its food appetite of small fishes, crustaceans and squids. It waits for the prey inside the cave with great anticipation, opening its mouth in high level as if it was the entrance of a cave that the victim thinks as a cave through which it enters and hides without realizing that they fell into the trap forever. It can eat equal to its half weight. Despite its isolation, it accompanies the sharks and swims with them as if they were running towards one interest. With this good accompaniment it does not pose a danger to humans as is the case with the sharks. Its farewell is not because of its small size, but its size reaches up to two meters long and weighs up to 30 kilograms, and of course there is a medium and small. Perhaps its company of the shark has been reflected in its durability rather than its ferocity. This bony fish can withstand harsh environmental conditions such as extreme water cold and high temperatures in shallow waters, and it also bears a lack of oxygen even while it is outside its water environment for up to an hour and a half.

The lower part is lined with yellowing skin, while the upper is covered with light brown skin with dark brown patches that it uses to camouflage to hunt its prey and escape from the danger. It is good at camouflage and clinging to life, so when the hook needle is inserted on its body it hides directly between the rocks and inflates its body in such a way no body can pull it that lead to cutting the hook thread. This trick created other easy alternatives way for fishermen to fish it to satisfy their appetite from this kind of fish to become accessible and widespread.

Most of these fish breed between March and August by laying eggs on the water, floating until hatching. The fish passing at the beginning of its life as a hermaphrodite (intersex) and then turning into a female after sexual maturity. After laying the eggs it can transfer to a male. The strongest male fertilizes eggs for a large number of females and therefore breeds rapidly. If this fish survives from the hunter's nets its life span reaches up to 22 years. Hamour (Greasy grouper) remains a symbol of luxury, a name, taste, shape and feature that the pockets of lovers race to buy it and enjoy its taste the mouths of fans (likers).



Al Ashkhar

Perennial evergreen dendritic plant, reaching a height of 5 meters. Its branches are brittle and have large leaves, and they all contain a copious milky sap .



The lactic fluid of the plant is toxin and can cause blindness and death in some cases.

Al Ashkhar is used in veterinary medicine and in human traditional medicine for many cases such as fever, epilepsy and asthma.

Cautions against using it without medical advice .

