



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

January 2018 - Jamadi Al-Awal 1439



Environmental monthly newsletter issued by the National Field Research Centre for Environmental Conservation

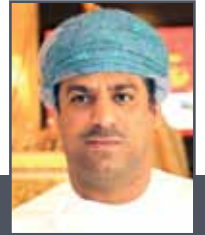


Sultanate of Oman
Diwan of Royal Court

Issue 27

«A Volunteer In My Environment» & «Green Wadis» National initiatives launched to serve the community





point of view

Towards «A Clean and Sustainable Environment»

Dawood Sulaiman Al Balushi

Editor-in-Chief

The slogan of the Sultanate of Oman's environment day, celebrated on January 8 was «A Clean and Sustainable Environment» envisages lots of environmental development messages including close connection between the requirements of development and at the sametime importance of protection of Omani environment. It requires work to achieve the objectives of sustainability, which needs the conservation of natural resources safeguarding welfare of the Omani people and enabling them to enjoy the development without getting any harm.

The vocabulary of this logo shows the vision of the future given by the Sultanate to relying on renewable resources and alternative energies such as solar, wind and water power. To tap alternative clean energy is also a global trend now. This is the worldview of many international environmental organisations which urge countries to achieve sustainability for the society and the natural resources by protecting them from depleting.

The celebrations of this national environmental day was a gift from His Majesty Sultan Qaboos bin Said to the country. It calls upon all of us, as government organisations, private and civil sector institutions, as individuals and society, to be prepared with bright ideas to make efforts for the achievement of the objectives of this slogan and adopt alternative energy projects. It also wants us to support national initiatives in this endeavour. It is an open invitation for universities, colleges, research centres to focus on applicable scientific research which is beneficial for the institutions of the states to achieve sustainability of the Omani environment.

Blessed are the celebrations of the Omani environment day as it enjoys support and encouragement from His Majesty the Sultan. Blessed are the hands and the ideas as well as the efforts made by all the sectors of civil society in protecting the Omani environment.

A number of activities are being organised in Dhofar governorate to protect the environment



The Sultanate celebrates Omani Environment Day under the slogan «A Clean and Sustainable Environment»

The Sultanate has organised a series of activities in a number of governorates to mark the annual Omani Environment Day which is celebrated on January 8 every year. This year the environment day was celebrated with the theme «A Clean and Sustainable Environment» which is the vision of the Sultanate. It is meant to focus on connecting sustainability of the environment with its being clean.



Speech of His Excellency Mohammed bin Salem Al-Tubi, Minister of Environment and Climate Affairs

Speaking on the occasion, HE Mohammed bin Salim Al Tobi, Minister of Environment and Climate Affairs, said: We congratulate His Majesty Sultan Qaboos bin Said on the eve of Omani Environment Day and thank his Majesty for his guidance and support to achieve the goal of a clean Omani environment which moves hand in hand with modern day development, as the Sultanate is proud of its natural ingredients and resources. The country has a natural environment and resources which attracts environmental experts and geologists from various other countries of the world.» He

said: The celebrations of the Omani Environment Day is one of the essential part of the Blessed Renaissance achieved under the leadership of His Majesty the Sultan. Those who work in the Ministry of Environment and Climate Affairs, government organisations related with the environment and protection of nature are making huge efforts as part of the celebrations to achieve the ultimate objective of a clean and sustainable environment. At the sametime, we cannot forget the role played by the private sector and the civil society organisations in pushing the wheel of progress and development in this area.

It shows that the Sultanate was playing major role in protection of the environment and taking care of the international and Gulf level frameworks in the Omani strategy for protection of environments of land, sea and air and saving the rare creatures from extinction from the world. A number of activities were organised as part of the celebrations of the National Environment Day which was held on January 8 in Dhofar governorate. It was decided to make the governorate the centre of these celebrations for the year, as support for the extraordinary efforts being made here to protect the natural environment. The governorate is the home of a number of natural reserves also. First set of events of these celebrations was organised in the Sultan Qaboos Youth Complex for Culture and Entertainment in Salalah. A visual presentation was made on sustainable environment and biodiversity in the



Sultanate. An operetta was also organised which had shows on traditional arts and theatre which carried environmental issues like overfishing, deforestation, as well as environmental and sea pollution. An exhibition was also held to create environmental awareness for the government and private sector organisations. There were also a number of activities and programmes organised to mark the day, including a seminar on environment at Sultan Qaboos Youth Complex for Culture and Entertainment in Salalah and cleaning beaches and coral reefs in Mirbat and Wadis of Hasik and plantations of a group of local and wild trees for anti-deforestation.

General supervision

D. Saif bin Rashid Al Shaqsi

Editor

Dawood bin Sulaiman Al Balushi

Technical Review

Khalifa bin Badawi Al-Higgi

Editorial Board

Issa Alsamsami
Marwa Mukhaini
Hana Al Hinai
Zakaria Al Mawal

Abdullah Alsabei
Mohammed Almqaimi
Mohammed Al Haddabi



The conservation of genetic resources, sometimes referred as genetic pool, is a national issue. It is a cornerstone of food security and scientific research as well as for the future generations. The importance of these resources lies in their role in environmental conservation and ecological balance. The biodiversity helps in the improvement of human welfare and the genetic stock plays role in spreading diversity and their development.

Because of its environmental role is known to improve human well-being

Genetic Resources



Prepared by Professor
Hamid Al Khafaji
Oman Animal & Plant Genetic
Resources Centre

A distinct location that reflects diversity

The Sultanate has rich and unique ecological diversity. There are different types of natural environments, ranging from mountains, highlands, wadis, plains, beaches and deserts. This is in addition to Sultanate's natural and astronomical location in the south-east of the Arabian Peninsula and its geology, which is deep rooted in history and its natural geography. This results in its different climate which can be seen in its different climate regions as desert and mountain ecology with the biodiversity either in the form of plants, animals or sea. This makes the Sultanate a country most diverse in its geographical regions in the entire Arab peninsula. The Sultanate's biodiversity has two unique locations between two vital geographical regions. The northern Sultanate is closer to the biodiversity of Asia, where there is a convergence with the species found in Iran and Pakistan. The biodiversity in the southern part of the Sultanate is influenced by the African continent.

Discoveries show diversity of genetic resources

In recent studies, a community of wild palm trees was discovered in isolated mountainous locations in the Sultanate of Oman. These trees have significant genetic differences from the species found in the Middle East and North Africa. Their most important characteristics are that their seeds are round and are slightly similar to the closer species. The samples of the collected as specimens are entirely different from modern varieties. The use of whole-genome sequencing of cultivars revealed a complex history of palm tree domestication involving the contribution of at least two wild sources of cultivated African species. This proves the existence of this biological bond. The discovery of wild palm trees in the Sultanate provides a unique opportunity to further clarify the history of the cultivation of this important crop, which was the basis of traditional farming systems in the oases thousands of years ago. Omani wheat varieties were also discovered in Biladsait area of Wilayat Bahla of Al Dakhiliya governorate. They date back to four thousand years. Such discoveries support and highlight the importance of the genetic resources of the Sultanate and its biodiversity.

**A national
issue
reveals
investment
treasures**



Importance of genetic stock

The importance of these resources is increasing day by day. It's importance not only for preservation of the environment and environmental balance, but also for its scientific, educational, cultural, social, economic, recreational and aesthetic value. Biodiversity has capacity to improve human welfare. The genetic stock plays crucial role in the development of species and other products. Biodiversity in food and agriculture is one of the most important resources of the country. Agricultural crops, livestock, aquaculture, wild trees, microorganisms and invertebrates are in thousands. This contribute to the genetic diversity and the network of biodiversity used for food production in the world. Biodiversity is essential for the survival and sustainability of life. It is not indispensable, whether they are insects when plants are pollinated or microbial bacteria necessary for manufacturing of cheese or in various livestock species. The Biodiversity is important in achieving diversification in the food basket. As mentioned above, their being sources of genes, which benefit the breeders of animals and plants in the area of animal husbandry and genetic improvement in the case of diseases or dangerous, has economic dimension. These things can not be fought with chemicals. In such situation genetic sources are used.

● Biodiversity of Sultanate due to its unique geographical location

● Strains of Omani wheat dated back to 4,000 years

● Genetic stock most important tool for development of species

Genetic pool a national issue

The conservation of genetic resources, which are sometimes referred to as the genetic pool, has become a national issue as it is a cornerstone of food security, scientific research and important for future generations. This is why there is an interest world over in these resources and their preservation by setting up banks of genes. These banks are considered strategic storage of raw material for genetic resources of plants and animals. They can be used for economic benefits. These genetic resources can be preserved and brought back once again as natural. This is why it is said that the gene banks are one of the best solutions for the conservation of animal and plants in the Sultanate.

**In the interest
of the National
Centre for the
conservation
of the Omani
environment**



«A Volunteer In My Environment», «Green Wadis» National initiatives launched to serve the community

Photographer - Abdullah Alsaba'ai:

The National Field Research Centre for Environmental Conservation of Diwan of Royal Court launched activities of the second phase of the Environmental Education Program «A Volunteer In My Environment», after huge success of the first phase of the program, which was launched in September 2016. The program has so far organised 53 activities, including workshops, lectures, awareness and environmental education programs. The program also achieved top positions in a number of volunteer competitions for social work in the Sultanate.



● **Launch of 2nd phase of program «A Volunteer In My Environment» after impressive success of the 1st phase**

Success motivates continuation

In its first phase, under the program «A Volunteer In My Environment», 53 environmental awareness activities during a period of 14 months were carried out. These activities included 5 environment meetings in a number of governorates, 4 evenings programmes, 14 environmental tours and six external partnerships. Two training programmes were also organised during the period as part of it. The most important among all these activities was the First Environmental Volunteers' Forum, which was participated by 14 universities and colleges from the higher education institutions of the Sultanate. An evening «Red Card» on the environmental situation in the country, a forum «Our Water is Wealth» for the school students in the North Al Sharqiyah governorate and other such programmes were also organised.



Community involvement

The programme was launched in a big event organised at the Oasis Club at Al Azaibah. The programme continued for four days during which a number of activities were organised to prepare trainers in the area of environmental volunteering. «A Volunteer In My Environment» programme was an effort of the National Centre to prepare a generation of the Omani youth to contribute in protecting their environment and country. It would mean making them understand the environment of the Sultanate, as His Majesty Sultan Qaboos bin Said instructed, with the participation of all segments of the society to ensure sustainable development. Through these activities, awareness was created about a number of issues and subjects related to environment so that people can participate and contribute in solving these problems and play a role.

Green Wadis Initiative

The Green Wadis initiative in the Sultanate was also launched at the celebrations to prevent different Wadis of the country to combat the desertification, by re-gaining the natural and environmental balance through cultivating local Omani wild trees. This is part of the efforts to achieve environmental, tourism, awareness, economic, social and sports related objectives.

Being one of the environmental research centres, the National Centre is also keen into the vegetation of the country and work for the prevention of the local wild trees of the Sultanate from depletion. This initiative is one of the outcome of field environmental research carried out by it. The centre wants to involve various governmental and private institutions, civil society organizations and the community in the planning and implementation processes. This is similar to the projects that the Centre succeeded to achieve them such as the study of biodiversity of Jebal Al-Akhdar and Jebal Saham as well as study of freshwater ecology in Luzugh (Samail).

A promising start

The initiative started with plantation of 650 seedlings in Wadi Al Ansab in the Wilayat of Boshier. These were various local wild trees of Oman such as Al-Sidr, and Al Ghaf. The Green Wadis Initiative has participated by more than 19 governmental and private sectors organisations.

More than 170 participated in the initiative. They were divided in groups so that each group could plant a set of seedlings in specific pockets. Immediately after the completion of plantation work, the participant participated in different awareness activities in the site, urging the people for voluntary work, highlighting positive aspects of it and also telling them the challenges they could face and the voluntary work does not have a time frame or limit. It cannot be counted. Any work can become an independent initiative.

- 53 awareness activities and environmental education programs
- National Centre keen to protect environment by involving all segments of society in awareness creation

Impact of the program on public awareness

The program left significant impact on individuals who were involved with it. It proved to be useful in increasing environmental awareness and knowledge about pollution-related issues. It also helps in improvement of the skills of its members, enhancing their leadership spirit also required to build social relations with institutions and society as well as it increases their capability in dealing with obstacles and finding solutions. The programme «A Volunteer In My Environment» increased awareness among the youth of the society about the environmental problems and their role in reducing them. The programme also

helped in formation of volunteers' teams in schools. The government and private sector organisations came forward to accept the idea of the programme and cooperate with the volunteers in spreading the environmental awareness messages through various means.

Awards

The program «A Volunteer In My Environment» won prestigious project award in "Wa Iyyakum" volunteers' competition. The project also got 4th position from among 89 volunteer projects participated for the Al Roya Award for community service.



As part of the endeavor to consolidate relations and develop cooperation and exchange of experiences

National Centre signs a memorandum of cooperation with PDO

**Photographer - Abdullah
Alsaba'at:**

The National Field Research Centre for Environmental Conservation has signed a memorandum of cooperation with Petroleum Development Oman (PDO), at the company's headquarters in Mina Al Fahal. At the occasion, the centre was represented by Executive Director, Dr. Saif bin Rashid Al Shaqsi and the PDO was represented by the General Manager, Raoul Restucci.

The memorandum of cooperation signed by the two organisations is aimed at consolidating the relations between the public and private sectors, keeping in view their mutual aspirations to increase their cooperation and exchange experiences in areas which helps in improvement of



administrative work. This agreement would help them mutually exchange ideas, hold dialogues and consult each other in research and scientific conservation of the environment. The memorandum of cooperation has talked about formation of a joint working group to implement the terms of agreement and make proposals for cooperation between the two organisations. Under this agreement, they would also exchange various publications released by both the

National Centre and PDO. The centre would also support the PDO's efforts in implementing its plans and projects for societies which are in company's area. The centre would also help the efforts of the company in implementation of its projects regarding research and environmental expertise in various activities. Under the terms of the memorandum of cooperation, the National Centre and PDO would share knowledge through organising various

Abu Dhabi

Convert 75% of its wastes into energy by 2021

The Centre of Waste Management (Tadweer), Abu Dhabi, has emphasised on the importance of developing effective strategies to transform waste into energy resources and reduce pressure on landfills through advanced technologies. It pointed out that the Middle East was experiencing high rate of population growth, urban development and economic expansion. This has resulted in more consumption and increased amount of wastes of all types. The centre has announced that an «EcoWASTE» exhibition will be held at the Abu Dhabi National Exhibition Centre between January 15 and 18, 2018. It will be participated by various companies, decision makers, municipalities, innovators and thought leaders. The centre said that «the increase in the volume of waste generated in the region goes beyond 150 million tons annually, especially in urban areas.» The centre announced that the concerned authorities in the UAE are locally developing strategies to reduce the volume of waste transferred to landfills to reduce the pressure on them.

Qatar

A project of waste as fuel for cars

The Ministry of Municipalities and the Environment of Qatar has announced the launch of a project of using waste as fuel in dual fuel cars. The Qatar News Agency (QNA) reported that the Ministry and the University of Qatar have jointly launched «a project of studies and consultations on the technology of extraction of organic gas emanating from waste, and re-use as organic fuel for the operation of cars running on dual fuel.» The project is part of Qatar's efforts to protect the environment, promote sustainable development, encourage related research in the energy sector as one of the priorities, and forge partnerships to serve the goals and aspirations of Qatar's National Vision 2030. On the nature of the project, the director of the waste treatment at the Ministry of Municipalities and Environment, Hamad Jassim Al Bahar, said: «A feasibility study will be carried out for the project as a whole about collecting the organic gas produced by waste treatment, its pressure, its purification for use in dual fuel ministry vehicles along with diesel and compressed gas.

Kuwait

Increasing air quality checking stations

An official source in the Environment Public Authority (EPA) of Kuwait has revealed a trend to tender for the establishment of new plants to monitor quality and pollution level of air in the country. It has pointed out that there were 28 fixed and mobile monitoring plants currently operating. They are distributed among 15 stations of the authority and 13 stations of the Ministry of Oil. It said that the new plants will be distributed in all areas, including new cities. The source told Al Qabas newspaper that the increase in the number of monitoring stations was part of the project of observing pollutants and development of monitoring programs to improve the air quality. This is one of the projects of the air quality monitoring systems of the country. It said that most important phases of the project are: national emission plants to determine the contribution of all sources of pollutants into the open air and increasing the areas under the air quality monitoring network gradually from 2020 to 2035.

2017 second harshest year in terms of temperature

An European Centre for Climate Change Monitoring said that last year was the second warmest year in the world after 2016, with signs of climate change ranging from forest fires to polar ice melting. The Copernicus Climate Change Panel, the first major international climate agency to talk about climate conditions in 2017, said temperatures averaged 14.7 degrees Celsius at the Earth's surface, more than 1.2 degrees Celsius above pre-industrial times. Last year was "slightly cooler than 2016, the warmest year and warmer than the second warmest year of 2015," it said. Temperatures, later in this century, is expected to reach to 19 degrees Celsius.

Britain: Birth of first polar bear a quarter of a century ago

Scotland's Royal Zoology Society announced that a polar bear was born in Britain for the first time in 25 years. Mother Victoria is believed to have given birth in the Highland Wildlife Park in northeastern Scotland, where the park staff heard a loud, sharp scream. "We first heard a promising noise in the week before Christmas and it continued into the new year," said Una Richardson, the park's Head Keeper.

"Because we do not see what is inside the cubbing box, we can not be sure that Victoria has given birth to more than one cub, but we are sure of birth," she said. Polar bears are known for their need for privacy and their newborns are very sensitive, so the special place for birth and cub care is closed to visitors to the park.


Environmental Vocabulary

The Psalm

Eng. Khalifa Badawi Al Higgi
almitc@yahoo.com

I went out early in the morning before the sun spread its golden rays on the heads of trees and stones. The weather was full of pleasant air that breathed in comfort and relaxation. The sound of the birds stopped me while they possess there positions on the tree and palm branches. Their voice is mixed as a musical track that began to spread its tunes in different and harmonious voices. Among them a voice that took in all kinds of voices, attracted me by its sweet voice and its intensity, which interred the mind and heart. The rest of the voices dimmed except its voice rose and mixed and varied. Suddenly my eyes headed towards it, and quickly turned to its location, so it immersed me in his beauty. It seems that it was watching me and send me its voice messages. When it realized my importance became comfortable and sent more beautiful sounds in different voices. Gathered on it all kind of beauty.

Balabal (sing. BULBUL) are endemic to many parts of the world and is widely spread in the Arabian Gulf, especially the Sultanate, where the white-cheeked Bulbul is widely common. They build their rounded nests from palm and trees fibers. When the time comes for mating in the summer, Balabal make attractive movements in their wings, understand their signs and become aware of their meanings. After that, the female puts about three eggs spotted with a violet and black spots. The eggs hatch after fifteen days of nursery, which undertaken by the parents alternatively. Both parents take care on the young as a family until the young rely on themselves and swim in the wide space to begin a new life cycle that may continue to fifteen years.

The male is distinguished from the female with the largest size of up to 18 cm, and with its higher sound. Its voice rises and beautifies after it reaches the age of six months, where it is able to enter the stage of reproductive life. Its colors vary between one type to another, which reach more than 130 species. Definitely, who sees its shape and heard its voice, at the first glance with no doubt realizes that this bird is nothing else than the (BULBUL).

Ancient and recent poets gave it a significant attention. Still its abnormal voce in the heart s and ears of all. It is one a of the of David's Psalms. The famous poet called (Al Asmaai) started one of his famous poem mentioning the sound of Bulbul that made him unconscious. He was neither blind nor wrong, but he realized the beauty of the BULBUL.

programs, training courses, workshops and lectures. The National Centre will also consider the possibility of adopting Lien methods in its projects for continuation of improvement in work. In his speech, Dr. Saif bin Rashid Al Shaqsi, Executive Director of the centre, said that the memorandum of cooperation between the National Centre and PDO would open wide horizons for cooperation in the environmental field between the two institutions. It would provide a fertile ground for exchange of experience, information, training and joint research projects. This cooperation fully complies with the centre's policy of activating and building partnerships with other institutions. The signing of this memorandum confirms the depth of attention given by PDO to the Omani environment and its efforts for protecting it. We appreciate the company's efforts in preserving and sustaining the Omani environment.

Saudi Arabia

announces companies want to win Sakaka project

The office of the development of renewable energy projects of Saudi Arabia has announced the short list of companies aspired to win the project of generating 300 megawatts of electricity using photovoltaic panels in the Sakaka area of Al Jauf governorate. According to a statement accessed by «Al Bīyah wa Al Tanmīyah» magazine, Saudi Arabia's Aquapower company, along with an alliance led by Japan's Marubeni, has reached to the final stage where the announcement of the winner company of the Sakaka solar power project would be made later this month. The first phase of the competition for contract included a detailed study of the offers made by eight companies which were qualified to participate in the tender. The study was based on an assessment of the compatibility of the companies with the requirements of the office of the development of renewable energy projects. The requirements also included that there should be 30% local share in the total value of the project.

Bahrain

MPs discuss 23 environmental legislation

The First Deputy Speaker of the Council of Representatives Ali Al-Arabi said that during the four legislative chapters, the Council discussed several legislations aimed at protecting and preserving the environment and combating various forms of pollution by about 23 legislations as laws by decree, laws and project laws. He stressed that, in light of the concern of the Council of Representatives on the environmental dimension, it has submitted during this fourth legislative term, many proposals with a desire, including a proposal to appoint a member specialized in the Environment in the Council of Tenders and Auctions, which evaluates development projects in order to preserve the environments.

Waste

Design: Marwa al.Ghafri

What happened to you? my friend. Why are you sad?

Today my brother is sick and I am the cause of his illness



I used to see the wastes and garbages and I showed laziness in putting them into the wastebasket. My mother insisted that I throw it away, I got rid of it by leaving them in the backyard. It piled up and attracted lots of microbes.

How come

How your brother's illness

: I used to see my brother playing with it. But neither I cared for it nor warned him against it. I never told him to stop this practice.

He is infected by microbes and viruses as a result of the accumulation of garbage. He became sick and stayed at home

The doctor warned us against repeating these acts. He asked us to clean our place and keep ourselves away from the causes of pollutants and not to play with garbage. He wanted us to move the garbage to their places.

