



The National Field Research Centre  
for Environmental Conservation



Sultanate of Oman  
Diwan of Royal Court

# Reflects on Environmental Issues



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**Book: Reflects On Environmental Issues**  
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**In the name of Allah, Most  
Gracious, Most Merciful**

**(And say:” O my Lord! Enable me to  
disembark with thy blessing: for Thou  
art the Best to enable (us) to disembark”)**

**True are the words  
of Allah Almighty**

**(Sura: Al Mumenoon/ Verse: 29)**

# Preface

***The Environmental media plays a crucial role in communicating awareness and educating all community groups about the significance of observing the environment and natural resources to attain environmental sustainability and widespread knowledge and culture about the most critical environmental issues and concerns.***

***This volume of articles is the result of thoughts on environmental issues I have experienced throughout my journey of work at the environmental filed for more than 18 years through which I wrote many articles and columns at different local media platforms during the period from 2002 to 2019, “Man and Environment” magazine published by the Environment Authority and “Lynx” newsletter issued by the National Field Research Centre for Environmental Conservation at the Diwan of Royal Court. These articles discuss and address a broad variety of local and international problems related to biodiversity, environment and climate; showing, in particular, the Royal attention and interest given to the Omani environment through a variety of writing styles.***

***This book comes in six chapters titled “Royal Attention to the Environment”, “Attention Paid to the Environment”, “Wild and Marine life”, Environmental Awareness”, “Environmental Issues”, and “Climate Issues”.***

***Hopefully, I pray to Almighty that this volume of articles would be an addition to the Arab library, in general, and the Omani library in specific, and that it would be a reliable source of environmental media in the Sultanate of Oman.***

***The Author***

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## Chapter One

# Royal Attention to the Environment



## Qaboos The Man of Environmental Peace

**W**hen the winners of the Sultan Qaboos Prize for Environmental Conservation 2015 were announced, and they climbed to the podium one by one to receive their awards, a huge ovation of the audience in the sprawling hall greeted them. It was the completion of the silver jubilee or twenty-five years of awards given annually for extraordinary achievements in the area of global environment. One of the winners after receiving this coveted award said in an interview: “It is the global environmental peace prize, this is Qaboos, the pillar of peace, who took global initiatives in all areas. The environmental peace is currently one of the most important foundations for the stability of the global system”

The progressive thinking of His Majesty has brought the Sultanate of Oman in the leading position in the world. It is the wise environmental policy of the beloved leader of the country which has paved the way for the Sultanate to occupy prominent positions at the world level. The efforts which His Majesty has made globally in the area of environment was hugely appreciated. This is the reason; he was chosen as the first head of an Arab countries to address the world at the Sustainable Development Conference which was held in Brazil in 1992. The Sultan Qaboos Prize for Environmental Conservation is the first global Arab award in the environmental field given to everybody without exception. This is why it is considered a major global humanitarian initiative.

The system of environmental work made in the Sultanate of Oman reflected the wisdom of His Majesty. He was the first in the entire Arab world who established an environment ministry in 1984. He brought integration between the economy and the environment in the area of development. He enacted rules and regulations and formulated laws to ensure the protection of human health and the environment. He made environmental awareness and its understanding part of the personality of an Omani, so that he can protect his environment, and natural resources for himself and his future generations.

We are grateful to you, His Majesty for your sincere efforts which you made globally and locally in the area of environment. You are the one who showed us the way, and you are the one who made its contours clear with your enlightening thinking and wisdom. We pledge to Allah that we will protect your environmental achievements at the global and local levels. We will work to make them sustainable and ensure that they continue to be better.

## Royal Attention to the Environment

**T**he Sultanate entertains currently the joy of celebrating the 45th National Blessed Day (2015) with a great resolve to secure a bright future under the wise leadership of His Majesty Sultan Qaboos bin Said, May Allah keep and protect Him. HM was the first person to establish the foundations of security, safety and peace in our dear country. It is the basis for the successful rally of environmental efforts in the Sultanate.

Thanks to the judicious vision of HM, the foundations and dimensions of environmental work in the Sultanate were deeply established. The Sultanate has made unique important achievements in this field considering that it is one of the most basic constituent for economic and social development. The environmental work became a main pillar for serving all aspects of sustainable development.

The continuous Royal attention to the environment has enabled the efforts of setting the legislative and institutional foundations for environmental works in the Sultanate. Royal Decree no.: 34 / 74 issued in 1974 on controlling the marine pollution has constituted the first nucleus for legislative structure in the environmental field.

This was followed by Royal Decree no.: 68 / 79 on establishing the «Environmental Protection and Pollution Control Board» that was honored by the leadership of His Majesty. Moreover; the Sultanate is the first Arab country to establish a Ministry for Environment in 1984.

Sultan Qaboos Prize for Environmental Protection introduced in 1991 as the first Arab prize in the environmental field worldwide constitutes a tributary of HM's bestowals for the international environment and His Royal attention to it. In addition, 2001 and 2002 were specialized for the Omani environment.

HM has granted a prize for the Human and Environmental Affairs Sector at the Secretariat General for the GCC Countries during the 29th session of its Supreme Council (held in Muscat in December 2008). HM the Sultan has issued many royal decrees setting frameworks for the laws and regulations that ensure protecting the human being and the environment surrounding it. In addition, Royal Decrees were issued promulgating the establishment of nature reserves in the Sultanate. Oman has also ratified many international environmental agreements, pacts and protocols that contributed into extending the collaboration bridges between the Sultanate and the countries of the world to achieve good and prosperity for humanity at large.

The generous care paid by HM the Sultan to the environment and His direct attention to it confirms to us that the environmental course will prosper and be developed continuously. The governmental entities exert all their efforts to carry out the projects of protecting and conserving the Omani environment in all aspects, in collaboration with the private sector establishments, civil community institutions and individuals. Therefore; we have every right to boast and take pride in the environmental national achievements made in the Sultanate thanks to the judicious vision of HM and his complete care to make the environmental development accompanied by the economic and social development to achieve the sustainable development concept in all the development projects.

May Allah protect HM and grant Him happiness, health, well-being and long age.

## The Promise and the Achievement

**H**e promised his people that they would live happily, surrounded by all the elements of modern life. He rolled his arms with all the wisdom and will to defeat the impossible. Every inch of the beloved land of Oman was subject to his ideas, strategies, plans and visions to make Oman at the forefront of the world. He craved the rocks to build roads, out of the deep sea he invented paths for global communication, out of the atmosphere, he created channels for peace and prosperity. He achieved his dream and turned it into a reality. Convoys of love to the Sultanate started to come from all parts of the earth. Thanks to his enlightened wisdom. Oman has become the peace icon of world.

The task for building a modern country full of all the opportunities of life, was never easy. He faced lots of difficulties, but the Qabooian conquerd the impossible. In a short period of time, he has made a quantum leap in all areas of life. Schools, hospitals, government institutions, airports and sea ports have been built. Every inch of this good land is blessed with the fruits of this country, and all the people are equal, governed by one law, and united by their love and loyalty to their leader and homeland.

The anniversary of November 18 renew the love of Qaboos the leader and the father. Qaboos the man who watered the soil of this homeland with his own sweat, so, the earth sprouted strong men who are ready to fight for their country and preserve its wealth, resources and civilization. If you see them in the battlefield, you will know that they have no fear of death. If you see them in the fields of science and literature they are the grand sons of Jabir bin Zaid and Mahlab ibn Abi Sufrah. If you see them sailing away into the seas and oceans, they are the descendants of Ahmed bin Majid and Ahmed bin Al-Nuḡman. Men love their country and their leader, and offer their lives for them.

The epic of loyalty and gratitude to the leader and the nation are engraved in gold letters, in these glorious days of blessed renaissance. We are entitled to be proud and to boast all the achievements made on this generous land. we pray to Allah Almighty to protect His Majesty Sultan Qaboos bin Said, may God cover him with His care and give him the enjoy of health, wellness and long life.

## Glow of the Environment

**O**ur beloved country Oman has made massive achievements in the area of environmental protection. This has been bright side of this country ever since the beginning of the Blessed Renaissance led by His Majesty the Sultan Qaboos bin Said. His Majesty, the Sultan has given environment extraordinary importance since very early days. His Majesty, the Sultan, has made environment one of the most important axis of this modern state, with all its geographical, cultural, political, social and developmental components.

This month we are celebrating blessed Renaissance Day. We feel proud of all the achievements we have made in the area of environment and which has taken us among the top ranking countries in the area. The Sultanate of Oman is the first Arab country to set up a Council for Conservation of Environment and Prevention of Pollution in 1979 under the chairmanship of His Majesty himself. The Sultanate was also the first Arab country to establish a Ministry of Environment in 1984 as an initiative taken by His Majesty. This is because he started giving environment priority before any Arab country could even think about. The Sultan Qaboos Prize for Environmental Protection was also set up for which His Majesty himself made donations to UNESCO during its visit in 1989. In addition to his, the Sultan gave a monetary prize in 2008 to the Human and Environmental Affairs Sector of the Secretariat General of the Gulf Cooperation Council. He also took special interest in establishment of natural reserves in the country. He issued royal decrees for legislations and laws to protect and preserve Omani environment. Oman ratified international environmental conventions and treaties also, and dedicated two years 2001 and 2002 for environment of Oman. There are also focus on ground environmental research, development of Omani human resources for the environment, and implementation of many projects, programs and activities to ensure the sustainable environmental development of the Sultanate.

When we talk about all these environmental achievements, we either feel proud of whatever we had done in the area in the Sultanate under the direct supervision of His Majesty the Sultan, or we remind ourselves how to protect these environmental achievements and take it forward. This is repetition of the call to inculcate the positive values of preserving Omani ecosystem and protection of its natural resources among our people and in all segments of our society. This is important to guarantee its survival for generations to come.

Whatever, achievements we have made in the area of environmental protection became possible only because of the bright ideas of the leader of our country and his interest in the local and international environmental issues.

## The Prize ... Enlightened Thought

**T**he 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 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.

## Chapter Two

# Attention given to the Environment



## Our Environment is our Home

**T**he Sultanate celebrated the Omani Environment Day that falls on the 8th of January, with the slogan this year being “Our Environment is our Home”. This significant national occasion is commemorated annually as per the Royal instructions issued by His Majesty Sultan Qaboos bin Said (May Allah keep and protect Him). It may be noted that the Sultanate marked the first Omani Environment Day way back in 1997. The celebrations over the years reflect the Royal attention paid by HM to the Omani environment, and the necessity of protecting the environment and conserving its natural resources. The occasion is an affirmation of the wise insight of HM’s Royal vision that called for a balanced approach to the country’s development plans, incorporating environmental protection into the development framework. Such a planned development brings about environmental sustainability, ensuring the all-round welfare and progress of all communities. The Sultanate successfully implemented major plans and strategies towards achieving environmental sustainability in all the governorates of the Sultanate over the decades beginning with the Blessed Renaissance. Such projects are implemented through various environmental programmes and awareness initiatives, which have the objective of striking a balance between the accelerating development requirements and conserving the elements of nature so that no aspect might threaten the other.

Our country has always focused on ensuring the health and wellbeing of its people along with environmental conservation, and this has been achieved by enacting relevant environmental laws and legislations, implementing effective programs and projects, intensifying environmental education and awareness programs, and collaborating with international environmental organizations and agencies. The Sultanate is also party to several regional and international agreements and treaties on environment. Today various Omani governmental and private entities collaborate with community organizations in carrying out a host of programs and activities that ensure sustainable community development.

The slogan “Our Environment is our Home” emanated from the vision of our beloved Leader who strongly believe that conserving the environment is the shared responsibility of all people, and as such communities across sectors and categories should work together to fulfill that responsibility. The slogan confirms that the environment is our home and it belongs to everybody without exceptions. To conclude, individuals, communities, government and private entities and civil organizations are all required to exert more efforts to conserve the environment with all its elements and natural resources. This year’s Environmental Day slogan embodies the continuous and mutually enriching relationship between human beings and the environment. It confirms that our environment is our real home.

# Eco-Tourism

**E**co-Tourism is one of the most important tributaries of international tourism. It is also one of the best and fastest growing tourism in light of the great tourism openness witnessed by many countries of the world.

Thousands of tourists flock to the eco-tourism destinations seeking comfort, recreation, and discovery of new sites away from the noisy cities. Therefore; the international statistics indicate a significant increase in the number of tourists who visit the countries enjoying natural attractions. Though some of these countries lack the development basics, yet they have paid a considerable attention to eco-tourism that opened up huge development prospects for them and constituted their most important source of income.

The mountainous, desert, coastal and historical areas; in addition to the forests and diverse wildlife constitute the most important environmental attractions in these countries. In this respect, tourists complement the efforts exerted by countries to conserve the environmental system according to regulated laws and mechanisms set by these countries to contribute into maintaining their natural, cultural and historical heritage. This way, such countries utilize their natural resources in ways that ensure conserving the ecological balance and seek to develop and sustain the aspects of such balance.

The Sultanate enjoys unique natural and tourist attractions. It has mountainous, coastal, desert, and aquatic environment. In addition, it has archaeological and historical sites, as well as unique biological diversity of animals and plants. This makes our country a perfect place for eco-tourism internationally and a popular destination for ecologists who visit it for performing ecological researches and surveys.

Various authorities at the Sultanate exert great efforts to develop such sector. However, the sector has not been utilized in an optimal way that makes it a tributary of national income for the Sultanate. Nature reserves may be one of the most important eco-tourism constituents in the Sultanate due to the unique and rare biodiversity they enjoy. The successful experiment of utilizing the turtles' nature reserve at Ras Al-Hadd is one of the successful experiments in this field. However, it remains as single successful experiment in light of the fact that there are diverse nature reserves at other various environments.

The eco-tourism sector in the Sultanate is a vital sector that will constitute one of the most important sources of income for the state if it is utilized in correct ways, which ensure the sustainability of its natural resources according to laws and legislations that pay attention to every different aspect. Utilizing this sector is not a difficult or complicated matter. There are many successful international experiments in this field that may be adopted in a way that suits our civilizational, cultural and environmental peculiarities. Therefore; we have great hopes in this sector because it is a very important source for diversifying the national sources of income.

## Environmental Coordination at the GCC Countries

**R**iyadh Declaration, issued in the thirty sixth session of the Supreme Council at the Cooperation Council for the Arab States of the Gulf held in the Kingdom of Saudi Arabia in December 2015, stressed on the necessity of increasing the environmental coordination in the GCC countries. It also highlighted the importance of integrating the efforts of such countries in some significant environmental issues. These issues include the environment protection, sharing expertise among the GCC countries and the respective regional and international organizations. The declaration recommended suggesting policies and decisions for protecting the marine environment at the Gulf Countries, as well as addressing the deforestation issue, depletion of ground water, and climate change. The assertion of Their Majesties, and Highnesses, leaders of the GCC Countries on the necessity of promoting the joint environmental actions in the gulf countries is extremely important. It comes out of their own convictions and direct attention to the environmental issues. Therefore; they recognize the necessity of addressing the environmental challenges and finding suitable solutions for them in a way that is commensurate with the current environmental situations at the gulf countries. Joint environmental coordination among the GCC Countries is a civilized basis through which our countries seek to ensure the environment conservation so as to achieve a sustainability of natural resources at the gulf countries and protect the human health against all pollutants.

Strenuous environmental efforts are being exerted at the GCC Countries, yet the current environmental situation requires more coordination and integration in various environmental aspects and issues between various governmental and private entities, as well as the civil community organizations operating in the environmental field. The Gulf countries are in a dire need to unify their environmental legislations, as well as activating their mutual programs and issues in all environmental fields. These programs include the environmental management, sustainable development for natural resources, protecting the human health against all environmental pollutants, whether they are industrial, chemical or radiological. They also include conserving the biological and physical resources of natural, wild and marine lives.

Furthermore, the awareness programs and activities that instill positive values and principles at the individuals about the importance of protecting the environment and conserving its natural resources should be activated. Attention should be paid to the climate change topic and its future effects on the gulf environment. The successful experiments and environmental experiences of the international organizations should also be utilized. May Allah protect Their Majesties, and Highnesses, leaders of the GCC Countries, prolong their lives, and grant them good health, well-being and long life.

## Our Environment is Our Life

**L**ife can be beautiful with money, prestige and position, and it may also be beautiful when all your dreams and aspirations are fulfilled, but it will inevitably be beautiful by all standards if it is clean and free of all kinds of pollutants. A clean environment offers you a good life and psychological, social and economic stability, even if you do not have the money, and vice versa.

«Our Environment is Our Life» is a slogan that embodies many meanings in the Oman Environment Day 2017 celebration, which falls on the eighth of January each year. The environment, with all its indispensable systems and human dimensions, is really our life. It is the source of our survival and continuity. This is because the environment in its general sense is the surroundings in which we live, influence and be affected on a daily basis. As much as your impact (positive or negative), the injustice will directly reflect on your daily life.

The environmental approach in the Sultanate balances the requirements of development and emphasizes the importance of preserving the environmental and natural system. This is in line with the directives of His Majesty Sultan Qaboos bin Said, who has always ensured a positive balance between development and the environment. Therefore, the authorities responsible for the environment in the Sultanate have exerted great efforts to achieve the Royal vision in this regard.

«Our environment is Our Life» is a slogan that must touch the life of every individual. We must all translate it into reality. The individual is the foundation and strength of society and the environment belongs to all of us. By preserving the environment in every way, we enjoy a clean, pollutant-free life. Our words must be aligned with our actions in this aspect. To be the ideal role model for our children and to instill positive values in them, such as the love and development of society. A clean, healthy environment must be a way of life for us and for our future generations.

## The Environmental Bill

**T**he economic challenges facing the world today, embodied in the continuous technological revolution and the increase in the number of industrial enterprises have made the world's countries run behind the material gains, oblivious to the negative effects of this technological revolution on ecosystems, natural resources and community health. The result was an increase in the bill paid by humanity in the form of attempts to reform ecosystems, natural resources and human health.

There is no doubt that such attempt of reform need high financial cost forced upon countries. This is the environmental bill that we are talking about and which countries are bearing to address the implications of these challenges and environmental problems that extend to the health, environmental, social and economic aspects. Nevertheless, those problems and challenges are made by States themselves.

Many countries in the world did not pay attention to the relevance of economic development and environmental development. Such countries developed their economic and development plans without a glance to the ecosystems. Therefore, they are close to destroy their natural resources.

The destruction of forests and vegetation, the extinction of many elements of wildlife and marine life, the spread of chronic diseases and epidemics, the increase in pollution, the toxic gases emitted from large oil factories, the widening of the ozone hole and the phenomenon of global warming, all these have led to serious climate changes. As well, such climatic environmental phenomena and other problems have also led to an increase in the cost of the environmental bill paid by countries to reduce these negative effects.

The cost of the environmental bill will inevitably increase significantly if countries do not place environmental and natural resources as high priorities within their development and economic plans. The compatibility between the economy and the environment has become urgent and necessary in light of the current situation of the countries of the world.

Instead of paying large sums of money in addressing the negative effects of the damage done to their ecosystems and natural resources, it is better to use such financial resources in implementation of new development projects and the sustainability of the existing development projects

# Environmental Investment

**E**nvironmental investment is considered as one of the most important alternative sources for countries income, for the development of their economies and for commercial investments. Many countries in the world do not possess oil, gas or mineral resources, but they have beautiful natural environments and a diverse natural life of animals and plants, plus attractive natural reserves. Such countries put in place development strategies based on the investment of such natural and environmental sites inline with their culture, without prejudice to the environment of natural resources and without destruction to such natural wealth. Such sites have become the focus of global tourists' attention attract the tourism and contribute in increasing the income of those countries.

The Sultanate is one of the countries that have unique natural resources. The diversity of its topography which combines sea with mountain, water with desert and historical sites with wildlife elements, made the Sultanate a destination for tourists from all over the world. Add to that, the fact that the Sultanate is the safest place amidst political storms experienced by many countries. This also makes the Sultanate an important station for commercial, economic and tourist investment.

It is important now to put in place new plans suitable for environmental investment. As well, it is a necessity now to activate the aspect of ecotourism with all its components. The government agencies should work together with the private sector to invest in this important sector which will directly contribute to the diversification of the country's income sources. The important point in this aspect is to develop conditions and laws that fit the physical and aesthetic situation of the tourist sites, so that such laws preserve the pristine and beautiful nature of these places, preserve all its innate ingredients and work on their development instead of become distructed and extinct.

The environmental balance in ecotourism investment in the Sultanate is a very important. That is why His Majesty the Sultan -may god protect him- has given it more attention in more than one speech so do not overwhelm side to side. That is because natural environmental national treasures for all the generations of the Sultanate.

## Philanthropy of Environment

**A**t one of the Arab environmental conferences, the lecturer focused on the concept of human philanthropy for the environment, saying that the person should dedicate himself to the service of his environment, protects it from deterioration and extinction, as well doing his best to educate his peers in the community about the importance of preserving the natural resources of his society.

When discussion was opened, one of the attendees stood up and poured out all of his anger at the lecturer. He said in his own local slang: «All this we do for the environment, so what role is left of the government to play?»

Giving to environment is a very broad concept and the environment itself is not the property of the government. Conservation and preservation of environment must not be limited to government agencies. It is a common duty shared by the individual and the government. Perhaps the individual bears larger parts of this important vital responsibility. Preserving the environment, before being a governmental concept, it is a subjective concept that concerns each and all of us. Humans are the ones who deal every minute with the environmental system continuously, starting from the house, then the surrounding area and then the whole society in all walks and aspects of life.

The greatness of the human care towards environment has been demonstrated in the least human behavior such as (Removing harmful objects from the road). Such concept must be applied to other greater actions, such as preserving wildlife, being plants or animals, preventing logging, reducing pollution in all its forms, preserving cleanliness and public property, ensure the sustainability of natural resources, as well as raising awareness of children, families and community members in the area of caring for the ecosystem.

Human care towards environment has no specific boundaries and has no closed spaces. It is a human example of peaceful and safe coexistence with the environment. Let us teach our children from their tenderness, the true concept of human care towards environment. Let us instill in their minds, the love of giving in all its concepts.

## **Towards «A Clean and Sustainable Environment»**

**T**he slogan of the Sultanate of Oman's environment day, celebrated on January 8 this year 2018 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 omani society in protecting the Omani environment.

## We are proud of you

**D**espite their young age, when you would listen to them and see their enthusiasm, personal ambition to take up environmental research, willingness to explore new world of plants and wildlife, you would be very happy by the existence of these beautiful and innovative energies as students. They love their environment and are keen to protect it by all possible means and methods. This love has led them to score first prize in the international Environment (GLOBE) Program, for research and study of the effectiveness of the use of reeds' plant in the fertilisation of the vegetations and its impact on water and soil on which they grow.

The students; Wijdan Al Nidabiya, Arwa Al Jalandaniya and Razan Al Nadabiya of Umm Hani School for Basic Education in Al Dakhliya governorate; have set an example in scientific research excellence and have succeeded in bringing up the name of the Sultanate in this prominent Environment (GLOBE) forum. In this forum, 150 research works from all across the world have participated. The winning of the first prize is indeed an evidence of its strength and distinction in finding appropriate solution of the environmental problem. It has also highlighted the great passion of our students in conducting scientific research and exploration for new information.

The Omani society has lots of such honorable examples in all scientific and literary areas. It also proves the interest of the Ministry of Education shows in such research and pays attention to the creation of a generation of researchers, through its various scientific activities and programs, including participation in the Environment (GLOBE) Program. We are proud of it. It urges us, as guardians, to encourage our children to engage in such programs and scientific activities which would help them gain self-confidence, and increase their knowledge and information in various areas of science, and establish a solid scientific base for the Omani society for a better future.

I thank all those who contributed to this Omani achievement of this international environmental award. I also thank the parents of these students, the faculty and the organisers of the the Environment (GLOBE) Program. Such success in the environmental areas has to continue and various governmental organisations have to support such scientific research and endeavours and apply its outcomes on the ground for the development of our beloved Oman.

# Philosophy of Nature

**T**he nature has its own philosophy. It also has its own values which helps it in maintaining topographic and ecological balance, away from human modernity and its technology which is threatening the environmental parameters of nature. This is the universal formula in which all the natural elements are according to the ultimate goals set by the Almighty.

The life cycle of nature is its real breather which helps it in balancing the natural and environmental systems. This is despite all the imbalances caused by direct human interferences which are causing fundamental changes. Earlier, the nature was dominant on human being. The human being was directly affected by the nature in its food, clothing and houses. But after the rapid technological advancements, the scales turned upside down, and human being by its technologies became dominant on nature. Now the human being is taming the nature in its own interests to suite its mental and life needs. But despite that boom in modernity, the nature continued with its own philosophy of defending itself through sudden climate changes, earthquakes, high temperatures, floods and other natural circumstances which the world experiences every day.

Recently, some scientists have discovered the secrets of nature that how the marine environment deals with the problems it faces when the sea is polluted by oil of the petroleum tankers and how the marine environment get rid of this situation. French scientists have discovered nature's cycle of increasing climatic fluctuations which are accompanied by tropical cyclones and floods by a range of new atmospheric reactions with some types of gases which are released from the surface of the earth due to any human act and which creates an environment suitable for these interactions leading to rapid climatic fluctuations and increased temperatures. American scientists have also discovered the role of forests and trees cut daily for construction work which absorbs large amounts of carbon monoxide. It was named as «carbon sink», which has led to planting of many trees in front of their large factories and the promotion of afforestation in cities in congested areas. In a new study recently published in a scientific journal on nature, the German scientists have recommended increasing the cultivation of flowers at home because it has a special philosophy as it activates memory and strengthens the heart muscles when sniffing, helps the nervous system to calm down and control the rising of anger. Besides, it soothes the eyes and strengthens the retina when viewed. As the Arab writer Abbas Mahmoud Al-Aqqad said in his book, «Hours between books,» has said similar things that that flowers have a special philosophy, they fill our hearts with happiness and beauty. They give us the sense of comfort strength, feeling and freedom.

This is the nature and this is the philosophy of survival. The process of understanding of reality in human being is based on science, reason and faith in creator the Almighty and his unlimited ability to do everything. Therefore, there must be a point of meeting between a human being and nature to create reconciliation between. There should be complete adherence to the conventions and norms of nature to which all the countries of the world should comply through agreements and treaties aimed at protection of environment. We are hopeful that a page of reconciliation with the nature and environment would be opened for the sake of our future generation and protection of human life.

## Excuse me, dear learner ... lets conserve our environment

**A**ll the scientific facts indicate that if the human being reaches to an advanced stage of science and knowledge, here the level of responsibility is decided to bear the burdens of life. Because this is the outcome of knowledge gained which also develops many positive habits to follow the examples of other people.

The learner here is not the one who has received the highest degrees in the school or those who reached to the highest administrative position. Instead, it means each and every person who has got vast knowledge as a result of his experience in his life and practice spontaneously. Knowledge of Socrates is wisdom, and the wisdom has to be productive and positive in this Life.

The learners are the vibrant lungs of any societies. They have a lot of important responsibilities for the advancement of the society to the best scientific, cultural and social levels. They are also the foundation on which education of future generations is based to teach how to preserve the wealths of the society and prevent anything which harms the country. They have they responsibility of the development and modernisation in a way which matches with the requirements of the modern day.

What I have to say here is that many of our learners are no longer aware of the meaning of responsibility and do not have the idea of role models in the society. The recklessness is the dominant trait in their personal behaviour without any sense of responsibility towards this country and keep it clean. We often see that they contribute to the pollution of the Omani environment by dumping the waste in places other than the specific areas, particularly in sea, parks or roads, after a time of recreation with the family or a large group of young people. Isn't this a disgusting scene and pity on the educational stages they have reached or the administrative and leadership positions they occupy.

What is most surprising is that when you talk to them with reason and logic on this irresponsible act you would find them that they realize the negative effects of their acts on the Omani environment. But at the same time they do not give importance to it saying that there are cleaning and sanitation workers in the country who collect wastes and garbage. This is their duty and for this they get monthly salary... Is there any logic of youth making such statements when they have reached to an advanced stage of knowledge and education. Or this is due to them lacking a sense of responsibility and a role model in the society, or they are actually do not have social and environmental awareness, despite being educated. If educated people would speak such thing then what one can expect from those who are less educated or not educated at all. It shows that this also depends on up bringing of the generations and urging them to preserve cleanliness of the environment at a stage when even they do not understand the word they utter.

This is not generalisation for all educated people. But this is a bad phenomenon which should disappear from our Omani society. This is because actually it is not right to call this segment of the society as "role models" or «senior administrative leaders» because if we use these terms we would be unfair to these words. If anybody who reaches to the level of role model or administrative leader must have a sense of responsibility towards the Omani society and has to be example for others in his generation to preserve the achievements and heritage of Oman.

## Globalization of Environmental Solidarity

**T**he rectification of facts never obstructed advancement. This is despite, the incongruity of acts, under the guise of indifference and irrational justifications given by those who played with the meaning of environment or the logic on which their ideas and acts are based. In their view, the environment is simply a sense of natural non-existent things or they talk about the findings of air, soil, water and animals. They do not give any importance to these things. For them these are small things. These things do not give them material profits to contribute in the progress of the economy, push the international share markets up, financial activity in black markets or increase an individual's income.

Modern technologies have become a priority for the peoples for development, urbanisation and progress. Technical developments are dependent on the globalization of materialistic economic civilization, which is now dominant in all aspects of life. This is how the globalization of environment is linked to economic globalization, because of the relation of the part with the whole. The technology based economy is a point of conflict in the globalisation of environment. This is because of its adverse effect on positive effects resulting in destruction of the natural environment and ecological life of the land, plant and animals, which is being faced by most of the peoples of the world. These people are raising their voice in front of international environmental organisations, but for no response. Game was played with economic and cultural globalization its ideologies were applied in the interest of larger societies. Similarly, the concept globalisation of environment was also played with. Whatever hurt the environment of the rich countries and their economies was rejected. These issues were focussed by the media. They were also on the top of the agenda of the international conferences on environment. It was made essential for all countries of the world to expedite the effort and find solutions of the issue as they were considered as international issue and which could have global environmental implications which require joint efforts to control it. The United States has given the call for globalisation of environment when the sand storms carrying toxic substances reached to it causing pollution from north east Asia to its west coast.

On the other hand, we see that there are hundreds of problems and environmental issues in the poor countries. But they are always left in oblivion or in files covered of dust in the corridors of international environmental organizations and bodies and we keep waiting that they would sometime see the light of the day, even without taking a decision. The economic theory of Friedman, the American Nobel laureate, says that «what the market produces is good, but the state's intervention is bad.» We can apply it to the environment and the problems caused by the use of new technologies in the poor countries under the term globalization of the environment.

What is happening is that in the name of the globalization of environment, efforts are being made in the interest of some country at the cost of others. We should refer to the slogan of one of the most important and leading figures on the global stage: “Globalisation of Environmental Solidarity given on the eve of international celebrations of World Peasant Day. Perhaps this slogan is the only way out if all the countries of the world could show solidarity. It can resolve their environmental problems without addressing just unilateral interest of some countries. The globalization of environment lies in solidarity with technological developments and the resolutions of global environmental organizations for all countries of the world without any exception

## Looking for Environmental Poet

**T**he poems of the Greek poet Homer known for Iliad and Odyssey are said to be a successful cure of heart and rising blood pressure. Then what about the successful treatment of the hostile clashes in nuclear chemical environmental warfare being raged in the world currently to win the arms race to join the club of the big countries.

What is striking most at this moment is the explicit threats by some advanced countries against other countries to bomb their nuclear reactors and chemical plants, if they continued with their programme to make nuclear bomb as if they pose a major threat to the advanced countries.

At this point, let us make it clear that in case of sudden bombardment of these nuclear reactors there can be a leakage of large amounts of nuclear pollutants spreading by air inside and outside the country in neighbourhood. We can see the volume of threats adversely affecting the population, economy and other living organisms as well as devastating ecological ecosystems in the entire region within and outside the country.

If we look back, we will see that there lies the answer. We cannot forget Chernobyl, Ukraine, where a sudden explosion occurred in the nuclear reactors of this city claiming the lives of thousands of innocent children, women and old people. They have actually believed that there was a new technological development which is a must to be pursued in various ways to ensure security. They were unaware that this development in this city could cause beginning of an era of diseases such as cancers, congenital, genetic and other serious health problems to destroy human being. They did not know that this also could cause destruction of the natural ecological life enjoyed by this charming city. It has ruined its diversity of land, sea and nature for which it was known in other European cities.

We have now understood the negative effect of the Chernobyl explosion. We have seen that this explosion has left behind it cases like congenital and genetic deformities of children which continued until now. It has left behind distorted children who suffer many life threatening diseases and sudden deaths. There was severe destruction which accompanied radiation effect on the environment and eliminated a lot of living things in them. Do we need any other experience of horror or anything more to fear from?

Don't we need a new poet such as Homer who gives us a spirit of revival, bouncing back and hope with his new poems? Don't you think that poetry could heal many serious injuries and diseases and save our environment from the threat of deterioration which could be caused by possible explosions in any country in the world which possesses such nuclear reactors.

The search is underway for this new poet who will save humanity from the clutches of such storms which could rage in some countries which pursue such programs in pursuit of hegemony over the world. If we could find such poet we would name him the poet of humanity or the much awaited poet of environment

## Chapter Three

# Wild and Marine life



## Trafficking of Animals and Birds

**D**espite the great efforts exerted to raise awareness by different government entities responsible of the environment in the Sultanate about the importance of the wildlife preservation and its natural resources to guarantee their sustainability, there are some wrong practices and acts made by some civilians in wildlife poaching unintentionally in order to get animals trafficked in, turning their back on the environmental laws and legislations that criminalize their acts and practices at the same time, and that those may eventually lead them to entering into no-good ominous judicial mazes.

In many cases, when the different Omani media tell us that some civilians were captured poaching wildlife animals or birds exposed to extinction while tracing and premeditating these animals, and with publishing painful pictures having all the horrible crime tools in them, it cuts into our souls how assumed some single-handed acts are by some people who sell their conscience in return for some money or for enjoying hunting as a hobby and spending their leisure times. This foggy and dim picture portrayed by those individuals within the Omani society is nothing but an individual image for individual acts giving the hint of their deficiencies in recognizing the meaning of the national wealth of the wildlife and the importance of preserving the ecosystem with all its various elements.

This phenomenon has spread widely in the society ringing alarm bells and being a real threat to the wildlife in the Sultanate. Consequently, this requires the emphasis on the implementation of law against these horrible acts, so there must never be any complacency in this issue either by laws or traditions. There must be heavy adjudications upon those individuals in order to be made an example of for whoever would like to get himself into these fields, because complacency in such issues may destroy the wildlife in the Sultanate and may open the practice of breaking in to this issue as it has become an all the same easy pass to escape. The wildlife system in the Sultanate is a big responsibility that lies with us all to preserve it from disappearance and extinction.

## His life is in Danger

**O**nce you see his body embraces the mountains, and his eyes monitoring the distant horizon to observe the wildlife with all of its natural icons, you will know that you are looking to a man who is loyal to his country and its natural and environmental system. Sometimes he is under the sun's rays and sometimes in the thick darkness. All this is to prevent some irresponsible person who comes at different times to catch some animals for the pleasure of hunting, eating or selling.

His life is always endangered by guns fired at animals and by the chase of cars raging in the prairies and nature reserves. Some wildlife rangers in the Sultanate have survived the death, some have been shot and others their lives ended by car accidents as result of the chasing. Their daily lives are in imminent danger due to some of the misdeeds of some people.

Such misdeeds by individuals who tend to hunt wild animals, is a serious threat to the sustainability of the Omani environment. Despite the environmental and legal awareness of this issue, there are still ongoing violations in this aspect, and rangers are exposed to many challenges, including loss of life. There are strong claims by the environmentalists in the Sultanate to activate the judicial side in this matter, and to tighten the legal penalties for the perpetrators of this environmental offense. It is also time to open an environmental court or judicial department to consider environmental issues that are constantly increasing in the Sultanate. Such judicial arrangements will be a deterrent to those who tend to commit environmental crimes and encroach upon the wildlife of the Sultanate.

Greetings and acknowledgments go to all the rangers of wildlife in the Sultanate. We are very grateful to you for your generous efforts and putting your life at risk in order to monitor and preserve wildlife and protect the homeland. Everyone is also required to be an advocate for and defender of the Omani environment and of all the achievements of the blessed renaissance. Environment is for us now and will be for our future generations.

## Incident of Burning Juniper Tree

**A** story was reported through the social media a few days ago, about some tourists who burned down a tree of Juniper in Jabal Al-Akhdar, is a sad incident, though, they were there to enjoy the beautiful atmosphere and the wonderful weather in this distinctive geographical area of the Sultanate. The incident raises self-regret over the behavior of some tourists, over their lack of interest in the ecosystem and their indifference to the preservation of such endangered environmental heritage.

The Juniper Trees are long-standing wild endangered trees in Oman. Some of them are thousands of years old. The Alalalan Tree is one of the rare natural treasures in the world. The competent authorities in the Sultanate are exerting diligent efforts to keep this tree safe from deterioration and extinction, after noticing that its numbers begun to decline due to natural factors. That is why the burned tree represents one of the most important environmental parameters in the Sultanate.

The irresponsible behavior of some tourists embodied in the destruction of plant and animal life in natural places, cause a heavy burden on the authorities who work hard to preserve the remaining endangered environmental life in the Sultanate. It is a bad behavior that is not acceptable by Islamic law, by general norms or civilization perspective. It also shows a lack of self-discipline which resulted in such negative acts.

Each of us must have a national environmental responsibility. Each one of us must instill in his family, children and society, positive principles, such as the importance of preserving public property, tourist places, as well as the plant and animal life in the Sultanate. The establishment of sound and correct values leads to the building of a strong and cohesive society.

## Violations Against Marine Life

**S**urprisingly, the series of violations against wildlife continues in some governorates of the Sultanate, especially with regard to marine organisms such as marine turtles and dolphins, which represent one of the most important ecosystems in the Sultanate.

This subject has recently been referred to by various social media outlets, the matter that resulted in denunciation of these irresponsible acts that destroy the natural life in the Sultanate. The social media also discussed the role of the responsible governmental bodies towards such problem.

The issue in general, is a dangerous and embarrassing phenomenon for our society. Sea turtles and dolphins are an important part of the ecosystems that is at risk of extinction. Overfishing threatens their survival in the Omani marine environment. These actions, which are carried out secretly and in twisted ways, are far from being controlled, though they are considered an environmental offense punishable by environmental laws and legislation.

Governmental agencies do their best to monitor wildlife in the Sultanate, but these bad behaviors are committed out of sight. Sometimes the criminals hunt and kill wildlife, marine animals and birds. Sometimes they burn and uproot plants and perennial trees. Thus, the series of violations continues unabated and wildlife is in constant danger from those reckless hands.

Government agencies cannot place a guard for every wild animal, sea, bird or plant, to watch and protect it all the time. There are surveillance and inspection patrols from time to time, but I believe that the custodian of safe life in the Sultanate is the Omani citizen himself. The citizen must protect his wealth and environmental and natural heritage from degradation, extinction and overfishing. He must contribute by informing the responsible authorities of those who wish to tamper with one of the Omani environmental systems.

Protecting the environment is the responsibility of everyone and the citizen is responsible for the protection of his homeland, heritage and natural and environmental resources, so that they will remain for him and his future generations.

## A Very Great Step

**T**he step taken by the Ministry of Environment and Climate Affairs and the Ministry of Tourism to activate the side of environmental tourism investment in the natural reserve it is, for sure, a very impressive step. It is a tangible progress in the aspect of ecotourism and exploiting it the optimal exploitation which commensurate with the continuous development of global tourism and the intense competition between the world nations to attract tourists by offering their natural and environmental wealth, as well as obtaining new sources of income that generates millions for such countries.

This investment step in Qurum Natural Reserve at the Governorate of Muscat and the Al-Sillail Natural Park at South Sharqia Governorate is good news of investment for the rest of the Sultanate's natural reserves. The establishment of tourist ports, the participation of the local community in the investment process and the invitation to private sector to invest in this vital sector, all this is good news. This step also confirms that the Sultanate has unique natural tourist attractions that must be utilized in all means for the diversification of income sources and not to rely on oil and gas as the main sources of income.

In order to complete the environmental tourism investment process in the Sultanate's natural reserves, the competent authorities must put in place conditions and laws that guarantee the protection of wildlife, animals, plants, and living organisms in these reserves. Investors should be instructed to follow the legislation that controlling investment inside Reserves to ensure their ecological healthness . Involving local communities which live close to the reserve in this investment process is very important and wise. Also, each protected area must contain a miniature scientific museum containing information about the reserve and some artifacts and historical antiquities found in the same area.

We would like to thank all those who are responsible for this wonderful experience. We hope that these bodies may consider themselves as guards to these nature reserves, so that there will be permanent control over them with the measuring the investment impact on environment and nature of each protected area. We are looking forward to a sustainable development for our natural reserves, to become promising sites for tourism investment while preserving its natural and environmental splendor and beauty in a sustainable manner.

## Al ... lan (The Juniper)

**I**n a glaring scene that is repeated more than once in the region of Al-Jabal Al Akhdar, which is the visit of some tourists after enjoying the most beautiful time escaping from the heat of the summer to the cold climate in Al-Jabal Al Akhdar by burning the trees perennial and rare, and left to burn in full in a scene of self-sadness, with these bad deeds that lead to the elimination of rare wildlife in the Sultanate.

These negative behaviors practiced by some tourists in many of our eco-tourism areas are a real threat to the Sultanate's ecosystems. Many of these irresponsible behaviors destroy rare national treasures that are difficult to return to their virgin nature. Some of them to hundreds of years, not to mention the destruction of vegetation, which is currently complaining of human threats and natural accelerated it, which foreshadows an environmental problem to come.

The efforts of the government in preserving the vegetation cover are continuous and continuous in this aspect. The Jabal Al-Akhdar area has been declared a protected landscape. There are also projects and programs to combat desertification and re-cultivate local plants and trees in order to preserve them from extinction. However, these efforts remain incomplete if not all together to make it successful through their positive behavior in dealing with all the components of the Omani environment, because the first and influential and affected by natural elements is human.

We can not place in each Juniper tree in Al-Jabal Al Akhdar guard watching it all the time or trap cameras, but we must be the sons of this precious country guards of national wealth in it from all the hands, and to ignite in our souls and the souls of our sons and brothers in the community of our love and interest in singles and elements of the Omani environment because it is a cultural wealth for future generations.

## Lush gardens .... But!!

**A**t first glance, you will see lush gardens with natural beauties which God gave to the marine environment in the Sultanate. It is charming sceneries that is capable of catching hearts and eyes. It fills you with satisfaction that the marine environment in Oman, is a precious treasure, buried deep under the sea water, receives the strings of the sun and covered with peace and security. It is the coral reef gardens that adorn the beaches and bays of the Sultanate extending from Musandam Governorate at the north to the border of Dhofar Governorate in the south.

Our marine gardens are natural aesthetics of marine life that go deep into the history of Oman, contribute to the prosperity of marine life of diverse marine organisms and rich fish wealth and played a pivotal role in maintaining the maritime balance of the Sultanate throughout the ages.

However, with the passage of time, these gardens began to suffer from some environmental problems due to nets that are sticking in them and damages as a result of the traditional anchors of fishermen. All that has led to the loss of some luster of the marine gardens, disruption of its natural functions and decline in the role they play in maintaining the ecological balance of the marine environment. This foreshadows an environmental problem that needs to be addressed with all possible means.

Efforts of the environmental authorities in the Sultanate, efforts of the voluntary teams and the clubs to preserve the environment of coral reef, are visible, but remain incomplete if there is no clear cooperation by fishermen, fishing and diving enthusiasts to preserve this treasure that is buried deep in the marine environment. The sight of the fishing nets, which extend over long distances and cover the coral luster is very painful and cause sadness over the loss of this natural wealth. The view of the traditional anchors stuck in the middle of these reefs and lead to the cracking of large areas of them also predicts a real danger that threatens its virgin environment which may disappear over time.

This is our last environmental whisper to the community is to join forces in bringing back the glimmer of hope to these lush gardens, just because it is one of the most important natural marine environments in the Sultanate. It is a unique and diverse ecological treasure, which we have to preserve by various ways and means.

## Stop Cutting Sidr Trees

**T**he view of the Sidr trees which is cut and degraded on the ground in some Wilayat of the Sultanate in the recent period, arouses deep sadness for the disastrous situation reached by this blessed tree, which has many benefits. Some expatriate labor cut the branches and leaves of this tree to sell them to some companies for little financial gain. This behavior is an indication of an environmental disaster if not addressed by the competent authorities, as well as by the members of the community.

Damaging this tree or any other tree is a crime punishable by law and environmental legislations in the Sultanate, because it will eventually lead to a serious deterioration in vegetation. There are laws and legislation regulating the use of some of these trees and plants for commercial and therapeutic purposes according to environmental datum that does not harm the Omani environmental system.

The only motive for companies the which encourage cutting of this precious tree, is the financial benefits inherent in this tree. Many cosmetic and medicinal materials are extracted from the Sidr tree. It is considered a valuable treasure for those interested in the manufacture of cosmetics and some medicines, as well as it is popularly used as an alternative medicine to treat many of the normal and chronic diseases that affect humans.

The Sidra blessed tree is mentioned in the Holy Qurʾan, in more than one place, indicating the importance of this tree and its functions. It is also mentioned in the noble biography of the Prophet Mohammed and in the ancient history books.

Environmental wise, Sidr is one of the most powerful trees that are resilient to climate change. It is one of the last trees that deteriorate and die naturally. It attracts birds and many living things to live in its shadows and between its branches and roots.

There are efforts made by the competent authorities after the outbreak of this dangerous phenomenon, the phenomenon of cutting Sidr trees. This is why we should intensify observation, not only for this tree, but also for all species of wildlife in the Sultanate to prevent the deterioration of vegetation cover.

Remember, individuals and society remain the first observer who can prevent these phenomena. Therefore, we must all be one hand in suppressing every hand that harms the environment of this precious country.

## The Afforestation ... Benefits and Risks

**I**t is nice to see the landscape of the streets in the Sultanate, which is green and rich with different kinds of trees. This has a good impact, due to the interest of different parties in the subject of afforestation, because of its various positive impacts to the environment, man and various living things. In addition, afforestation is combating the phenomenon of desertification, which has become a source of concern to all as a threat to the Omani environmental system.

Yes, the efforts are wonderful and distinct. They show a good environmental awareness embodied in the interest in afforestation. However, these efforts need to be correctly directed to the right way, which achieves various benefits of such efforts. This means moving away from the cultivation of exotic species of trees that threaten the Omani environment, and focusing on the cultivation of Omani local trees and plants that have become part of the global endangered tree species.

What prompted me to write about this, is the observation of an ecologist from an Arab Country when he visited the Sultanate on a leisure trip with his family. This man tweeted in one of the Social Media sites to say: «Oman is a beautiful country, its environment is clean and virgin and its laws are strict in preserving its natural components, but it is dominated by exotic trees in the streets, parks and gardens, while it has a large stock of local and unique trees in the region. If Oman does not pay attention to this problem, it will pay expensive prices to address this problem in the future, as happened in some countries of the world.»

In order to not be compelled to deal with the issue of afforestation in the future, we must take care of this problem and develop appropriate solutions by avoiding cultivating exotic trees and replace them with local Omani trees and plants. Our environment is rich in diverse plant cover that resists drought and grows naturally and does not require large quantities of water for irrigation. Prevention is better than cure.

## Two new reserves

**I**t was nothing but a noble gesture of His Majesty Sultan Qaboos bin Said which came as a Royal Decree to set up two new reserves in the Sultanate of Oman. One is Al Hajar Al Gharbi to see the lights of the stars in Al Dakhiliyah governorate and the other is Al Rustaq Wildlife Sanctuary in South Al Batinah governorate. This is sufficient proof that the wildlife in Oman enjoys interest of the supreme leader of the country. He has extraordinary vision and farsightedness. The importance he attaches to the preservation of the Omani ecosystem and protection of its natural resources for sustainability is enough indicator of it.

At this time when there are political, economic and ideological conflicts raging everywhere in the world, the decision to set up two natural reserves tells that the Omani environment is in right condition and in the safe hands. His Majesty, the Sultan has always urged that the efforts for development should be accompanied by the resolve to protect all elements of environment. He is always for equal alignment between developmental boom and environmental components.

In the Sultanate of Oman, the wildlife is constantly affected by a number of persistent human and natural threats. Some of them are illegal hunting, running over animals, burning of old trees, tampering with green vegetation, drought, desertification, erosion and loss of soil some of its natural elements. All of this has affected the elements of the Omani environment and its wildlife. They also have endangered some of the wildlife. This is why the natural reserves were established as strong deterrence against the elements which puts the environment and wildlife into danger. These reserves have reduced the human and natural threats and supported the development of wildlife significantly.

These two natural reserves are another contribution of the Blessed Renaissance to the ecosystem of the country. This noble gesture calls us to join hands with the public, private and civil society organizations as well as individuals to make efforts for preservation of all environmental achievements made on this land of virtues.

## Loyalty of a Snake for an Old Woman

Once upon the time in ancient period that is told in one of the Arab countries - responsibility is the narrator's - about a snake that lived in a tree at a house that belonged to an old woman, who had some young grandchildren who used to play under the same tree and having fun, when they visited their grandma. The snake, also, had small young children to look after and provide them with their daily needs of food. The snake lived well and peacefully on the tree near the old woman house. One day, when the old woman's grandchildren were playing and having fun, they went to that tree. When they saw the young snake, they beat them to death with stones and sticks. When the snake returned, it found its young ones dead in front of the tree. The snake was very sad and decided to take revenge on the children who deprived her of her children.

The grandmother used to heat the milk and then put it inside a jar and hang it over the tree to cool, so the snake decided to go to that jar and put its poison inside the milk jar. The snake returned crying to where the bodies of its dead young ones under the tree. There, the snake saw the old woman scolding her grandchildren and beating them for what they did for the baby snakes. The snake felt the tenderness and love of that old grandmother.

Then, the snake took pile of soil in the mouth quickly went to the milk jar and put it inside the jar and dropped the jar from the top of the tree to the ground so that the children would not drink the poisoned milk and die. The snake behavior at that moment was because of the snake loyalty to that old woman who surrounded the snake with affection and love.

This story of the snake and the old woman highlights a kind of loyalty, compassion and interdependence between humans and animals because they are the basis of the ecological and natural balance in the globe. It also refers to ancient civilizations that domesticated many wild animals to help people in their daily works. Thus animals were a kind of ecological balance in life. However, with the emergence of the globalization of technology and development, the bilateral relationship between man and animal has been disrupted and the balance has become disordered in favor of man at the expense of animals. That led to the extinction of many wild animals in deserts and forests. Some animals even went to the tops of mountains to hide for fear of being hunted and extinct.

The disruption of the ecological relationship between humans and animals has become controversial among environmentalists and economists. Environmentalists reject the technology and development that destroy and threaten wild life. Economists seek financial profit without taking into account any environmental and natural necessities, being that through development projects such as industrial establishments, tourism and urban projects such as hotels, resorts, tourist and urban cities, even though many countries in the world, especially Arabic countries, despite their knowledge of the seriousness of environmental damage, they are performing large-scale development projects that destroy the spectacular ecological and natural life, both on the sea coasts, deserts or forests. They attribute the necessity of establishing these projects to the lack of unique and distinctive sites for their establishment in addition to keeping pace with the growth and development of urban, tourism and technology in order to raise their economies.

We are not trying here to prevent or oppose these large development projects. That is because they will contribute to the lifting of the economies of Arab countries and reliable in revitalizing the economic, trade and tourism situations, so is the practical side of those countries that suffer greatly from unemployment. On the other hand, we call on those in charge of these projects to have an environmental and natural consideration for the area where such projects are intended to be implemented, as well as considering the extent of environmental and natural damages caused by such establishment. If the damage is significant, they should consider another alternative area where the project can be established. If there is no other alternative area for the project, they must find other solutions to maintain the balance of the biodiversity of the targeted area, such as taking into account the rehabilitation of the area environmentally and naturally so as not to lose all its advantages in addition to the preservation of innate diversity. In this regard, animals or plants can be transported to other areas with the same characteristics and establish natural reserves for such animals or plants in order to preserve extinction. It is also possible for those involved in these projects to establish a natural or environmental museum within the project area in order to preserve the ecological excellence of the area and serve as a tourist and natural shrine for them.

Therefore, we must always take into account the ecological nature of the region where large development projects are to be established, in order not to lose the natural balance of our Arab region and lose our environmental and natural identity. We must regain loyalty to our Arab environment as the snake did to the old woman.

# Great Green Wall

**D**esertification is one of the most serious environmental issues being faced by the world in general and the African continent in particular. This problem is due to loss of its vegetation, which led to its degradation and degradation of its plants and livestock and deterioration of balance of its water. This situation has claimed the lives of thousands of people and displaced many of them in search of food to meet the requirements of their daily lives. This is human tragedy with which all small and big as well as rich and poor has expressed sympathy when they watched the scenes published as photos in newspapers or broadcasted on television as reports of famine in the world. All this is consequence of the desertification on earth. It had disastrous impact on social and economic life of these countries. The Earth has suffered more than 50 years of land degradation, with 11% of the vegetation covering the surface of earth. Now, one billion people are threatened by drought and poverty caused by this situation. It costs the world US \$ 42 billion. For Africa alone, it costed about US \$ 6 billion. The number of the countries whose dry lands are facing desertification reached to 110, according to international rankings.

The international efforts to deal with this situation led to signing of a number of international conventions, treaties and agreements. The most important of them was United Nations Convention to Combat Desertification. But these international agreements remained confined to a limited framework of exchanging expertise by the countries in this area and holding conferences to promote international cooperation and rapprochement among them. The problem clearly continued without any effective solutions in many countries of the world. The situation has deteriorated in many countries where arid lands cover more than 40% of their total areas. The estimated annual loss of food productivity due to desertification and drought to be US \$ 42 billion.

Perhaps, the African dream project to build the Great Green Wall to stop desertification in the continent is one of the most important and latest projects of this area. It has become a dream for Africa to get rid of the spectre of hunger and poverty which dominated this continent for long time due to desertification and lack of food productivity. The idea of Great Green Wall was learnt from the experience of China which started its green dream in late 1970s. It started construction of 4,500 km China's Green Wall linking the Far East and Northwest of the country. The project was successful in reclaiming more than 20% of the desert land and controlled more than 40% of the lands which had faced soil and achieved protection of 70% of its agricultural land from the advancements of sand dunes in many areas of China. In Africa, this dream was launched by former Nigerian President Obasanjo to build a «Great Green Wall» beginning from Mauritania in the west, passing through Senegal, Ivory Coast, Burkina Faso, Niger, Nigeria, Sudan, Ethiopia and Eritrea and reaching to Djibouti. It is aimed at reforestation, soil consolidation, combating desertification and poverty. It is based on data on rainfall levels, quality of terrain and nature of vegetation cover. It includes reforestation of 15 million hectares of dry lands with a width of 15 km and a length of 7,000 km. The scientists who are supervising this project also expect that the people who live in the areas from where the wall would pass through would be the beneficiary of the plants, fruit trees and ecological tourism investment and the restoration of arable land, which was lost due to desertification. They will also get benefit from drinking water ponds of the projects.

We hope that this dream of building Great Green Wall will become a reality and contribute directly to the elimination of desertification and hunger in the African continent. The positive signs in the progress of the project have started coming. An African executive agency has been set up to supervise and implement this project. Many African countries have come forward to join this vital project. I hope that this dream will become a reality. It will be a real and tangible experience with which we also would be a beneficiary in ending desertification and hunger in many countries of the world. Perhaps, Arab countries would also understand the importance of this project in future and join hands to build an Arab Green Wall.

## Treatment by Forest

**N**ature is a very precious treasure caught between the positive and negative exploitation at the hand of human being, according to his or her material and commercial requirements. It is used according to an ecological system, from time immemorial, defending itself in time, but remained under human control which made fun of it wherever it had commercial interests. The human being went on uprooting forests and taking advantage of its water and air. He hunted its animals, destroyed its natural environments and used it for eco-tourism and for other daily needs.

Turing to nature and using it is essential and unavoidable as it is the only source which only gives and does not take any material returns. A few days ago, the Okotama municipality of Japan announced the allocation of one million dollars to turn its forests into a new natural treatment centre of the world to be named as «treatment by forest». The program included getting benefits from those forests for natural recreation and relaxation without human intervention and technologies. In this program, participants are given two hours of daily training according to a plan prepared for them which included walk in the forests led by a specialist guide and performance of some relaxation exercises so that the participants interact with the elements of water and air, smelling the plants and swim in the water ponds, listen to the chirping of birds and enjoy the green landscape. This program has proved to be very effective in treating many diseases. It reduces blood pressure and pressure on blood arteries of the heart, increases hormonal secretion of the body, relieves chronic headaches, reduces depression, and rejuvenates the body. As a result of the increased participation of participants in the program, Japan announced the allocation of 40 sites in various areas to be centres for treatment of forests.

This is the nature, and these are its laws. Whatever was the level of material benefits for the Japanese of this new treatment, it proved that nature has multiple positive dimensions which must be preserved and explored. Forests are part of the elements of mother nature and there are many parts which are not yet been discovered. Many of our Arab countries possess vast areas of forests, deserts, seas, rivers and beautiful beaches but they have not yet been properly exploited. Such simple ideas, cost nothing. They must be taken into consideration because they have positive benefits, including physical, natural and tourism. We must realise that the nature is a lost treasure which need to be discovered and work is required their to develop, improve and conserve them so that they continue for use and our coming generations.

# Chapter Four

# Environmental Awareness



## We are all responsible for protecting the Environment

**E**nvironment is one of the most highlighted aspects of the developmental framework in the Sultanate, and features prominently in all the commercial and industrial projects in the Sultanate in line with the government policy committed to protecting public health and surrounding environment. Indeed, the Sultanate is among the few Countries that have found a fine balance between economic and environmental development, working on the principle of sustainable development. In fact environmental preservation and conservation of natural resources through sustainable development practices is considered a citizen's right not for the present generation alone but future generations as well. Clearly, the Royal attention paid by His Majesty Sultan Qaboos Bin Said to the global as well as national environment has contributed to raising the profile of the Sultanate as one of the leading countries with a strong pro-environment focus.

Worth mentioning is the biennial Sultan Qaboos Prize for Environmental Protection, awarded through the UNESCO, which encourages and recognises proactive efforts at protecting the global environment. The prize highlights His Majesty's continued support for green causes on a global scale.

At the local level, His Majesty has strongly encouraged the design and implementation of various initiatives towards nurturing the environment. Going back to the 1970s, His Majesty presided over the Environment Protection and Pollution Prevention Council in 1979, which laid the framework for policy guidelines on safeguarding the Sultanate's environment. Our beloved Sultan also established a separate ministry for the environment in 1984, a first of its kind move in the entire Arab World. Further, 2001 and 2002 were marked as the Omani Environment Years.

His Majesty has also instituted an award for the human and environmental affairs sector at the Secretariat General for the GCC Countries in 2008. In addition, the Sultanate has endorsed many international environmental treaties and agreements.

The Sultanate has also drafted several key environmental laws and legislations to ensure that economic development doesn't jeopardize Oman's environmental health. Going further, many natural reserves had been established in the Sultanate.

The efforts exerted by the various government entities in the Sultanate to preserve the Omani environment and conserve its natural resources are clearly visible.

In this context it must also be noted that environment belongs to us all and preserving it is a collective public responsibility, not just that of the government. His Majesty, may Allah keep and protect Him, has elaborated on this idea in many of his speeches.

Based on the Sultanate's shared values and social principles and in support of the focused government efforts in the environmental field, both individuals and social institutions should willingly assume a significant role in preserving the Omani environment. To conclude, as community members we must all take it upon ourselves to work towards raising the level of environmental awareness of our family members and the larger community, and instill in them a pro-environment mindset and channelize every effort big or small to achieve the goal of preserving the Omani environment and conserving its natural resources. We can't afford to ignore that the coming generations have a fundamental right to a clean and safe environment.

## I learn from her ..

**S**he is very young, yet sometimes learn from her many positive behavioral traits that once instilled in her but later forgot. Once by mistake threw out waste bag through the car window; and not clear all of a sudden my daughter screamed in childish tone: “This is wrong. God will punish you for throwing waste in the street.” I stopped the car, got off and picked the rubbish bag and deposited the same in the allocated waste bin. I also apologized and thanked her for her responsible attitude and didn’t forget to buy her a gift as a token of support and encouragement.

Such a positive attitude and concern for our environment must instilled in our children and youngsters by exposing them to fundamental environmental concepts from a young age so that it becomes daily habit on the strong conviction that those are right actions and thoughts in line with Islamic believes. Developing a socially responsible and ethical attitude among the new generation is very important in the light of fast-paced technological revolution we witness today. Children are constantly exposed to a lot of ideas and traits as they interact with technologies in their daily lives. So, we must be fully aware of the underlying challenges, and guide our children toward right conduct that conform to our religious norms.

Environmental education attitude than just knowledge. It is more practice than theory. Modern studies stress the importance of educating children about positive attitude at an early age, confirming that the family plays a pivotal role in instilling right behavior in children without ignoring the progress and development brought about by modern age. The studies also highlight the role of the community and social organisations like sports clubs in promoting such an attitude.

Again, the responsibility of parents and educators is crucial. In fact, what you cultivate today will be harvested tomorrow. We win when we educate them. We are the role models for them. Our children are the backbone of the country’s future and the basis of the community. We must pay attention to our children and their behavior for the progress and development of our society.

## The School Competition of Health and Hygiene

**A**l-Batinah North governorate has won His Majesty Sultan Qaboos' Trophy for the sixth time in the competition of maintaining health and hygiene in the school environment for the academic year 2014 – 2015. This competition has completed its twenty fourth year since its launch in the academic year 1991 – 1992. It reflects the insightful vision of HM stressing on the importance of promoting the environmental awareness among the students considering that they are the mainstay of community development.

This competition, with all its different curricular and extracurricular aspects, and activities, has contributed into instilling positive health and environmental behaviors that help the students to be effective and productive in the community. It has also opened the way for creative and productive thinking. Furthermore, the competition has acquainted the students with research skills in a way that copes with the objectives of this competition. In addition, it has promoted the values of citizenship by consolidating the students' love for their country, defending it, and maintaining its properties and natural resources.

Promoting environmental education among the students is a main requirement sought after by the communities to achieve the sustainable development concepts, and to consolidate the principles of environmental actions in the community. This awareness mission targets the behavioral aspect of individuals for building a generation capable of performing a positive role in preserving the community. This was emphasized by the international academic conference on the aspects of environmental education.

To complement the role played by schools in this aspect, parents and families should support the environmental principles in the community. We should be good role-models for our children and relatives in conserving the natural resources of the country. The promotion of community values at the students should not be limited to schools only. The real and main breakthrough should start from home itself.

## One Environmental Hour!

**W**e have celebrated the beautiful environmental occasion “Earth Hour” that many people have celebrated for a full hour in the evening by turning off the lights from eighth and half to nine and a half PM; or enjoy the natural atmosphere and the candles that have illuminated the place stealthily in the moon light. It has given the occasion environmental dimension and natural beauty; also it has picked up large attention through social networking and has spread the realization of that man bears a large part in maintaining the ecological environment and to address climate change and the sustainability of ecosystems on Earth.

The environmental movement for all segments of the community to celebrate the environment has been very nice, it raced individuals and civil society organizations to celebrate forming the strong tributary of government agencies in the developmental role of the environment. The important thing is we hope that this social environmental movement and be continuous throughout the year, and that does not stop or gets limited to an environmental occasion or just an environmental-hour, because of the environmental dimension and maintenance of an integrated system of continuous life-long sustainability of all natural resources; which leads in return to a life of best for us and future generations.

An environmental one hour is not enough, we need hours, and perhaps days and months for environmental work in the Sultanate, volunteering fields in environmental work cannot be confined to a narrow range, because environment is everything in our lives. Starting from the house and cleanliness, and school and community with all its activities and programs, and the areas of economic, social, cultural and scientific development work; all entering the environment a key part in it. So our initiative as individuals of society in preserving the different social system aspects are considered to be a form of environmental sustainability, so we must redouble an hour to continuous hours; and have the environmental sense always keen in everything, because environmental sustainability perpetuates our lives and moves to the better.

## Give me Thought!

**T**he Environmental thought is not a curriculum taught in schools, universities and colleges, it is a behavior instilled in the minds of all the segments of the society, a culture of community instilled in deeds before sayings, translated into reality in our homes and community, and a straight approach ordered by our religion, and urged by Sunnah.

Many negative environmental actions occur repeatedly in front of people, it might be simple in the matter of action, but it is big in the matter of meaning, the one who does such actions thinks it is natural; however, such actions represent a dangerous environmental behavior that indicates no awareness in this doer, uncaring for what he just did.

Some of these actions are represented in throwing waste on the beaches and in touristic places, manipulating public property, cutting the tree roots for cooking in entertaining trips, and throwing rubbish from cars' window.

Such negative environmental actions deteriorate the behavior of many people, maybe a man can instill such bad behavior in his sons and family automatically by him practicing it. Environmental awareness is not the task of the governmental parties alone, it is a duty to be done among all, governmental and private parties, schools, clubs, and voluntary associations; basically, it is all about individuals' behavior inside the one home, the role of the father is to aware his sons with the positive and ecofriendly thoughts and deeds, so that he can be their role model in all his daily practices.

A whisper to parents: Give me thought, give me behavior, and I will be a loving individual for his home and environment, and I will preserve it away from manipulators.

## Lack of awareness

**T**he matter that caught my attention during the First Environmental Forum, organized by the OCE in the Diwan of Royal Court and Al-Roaya Newspaper, was the serious discussions on the Environmental Education theme. Most participants agreed that there is a lack of environmental awareness in the Sultanate, due to the misconduct of some individuals in the community, who tamper with the Omani environment system, have no respect for the preservation of public property, and the dump dirt and garbage in tourist and public places.

I agree with those participants on part of the real facts they raised, but I disagree with them on some important points. First, we must be aware that everyone understands that these negative behaviors against the environment are wrong. This is what we learned in school from childhood from school books and our Islamic religion urges to preserve. Therefore, public awareness is there in the understanding and perception, but the self-awareness of those behaviors at that moment is missing. If you talk to the person who behave in such way, he/she will admit that his behavior is not right, but may tell you that it is normal and “take it easy” without thinking about the situation or his/her action.

What is worse is that many of those behave like that in front of the others, are educated people with academic degrees. Are such people not aware that their behavior is wrong? In fact they are and they know, but they just “take it easy” due to the lack of strictly applied penalties.

The problem serious and will become worse, if we do not put in place appropriate solutions. That is because such actions by such people take place in front of their children. These children will learn wrong behavior and thus such behavior may become habitual. The solution is simple. It is to formulate some legislation, laws and penalties against those who conduct such wrong behaviors, and gives powers to the staff of environmental bodies; enabling them to impose financial penalties on the spot. Also, certain mechanisms must be put in place, with coordination with the competent authorities in this regard. Only with legal deterrent we may actually achieve environmental awareness. Legal traffic deterrent has been proved successful through the experience of legal traffic deterrent, which created a strong traffic awareness in the Sultanate.

## Efforts of Ahmad

**S**ince the beginning of this holy month of Ramadan, Ahmad made massive efforts to create environmental awareness among the people of his village. He tried to educate and convince them to not to exaggerate while preparing food and eventually wasting it, reduce use of plastic bags while buying anything from market. He also worked to educate children about the importance of environmental conservation and preservation of natural resources. He tried to urge them that this holy month was a right opportunity to strengthen religious environmental values. This month is full of virtues and blessing for all human being. This is also a month when people welcome good advice and guidance and work with pure Islamic principles and values.

Ahmed urged people of his village to avoid exaggeration in preparing food of all kinds. He reminded them that this month was not for food-consumption. It is actually the month of mercy, forgiveness and prevention from the fire of hell. He formed a team of villagers to collect extra food and distribute them to the poor and needy. He was successful in instilling this idea and creating awareness among the people of his region. He also collected some donations and made eco-friendly bags and distributed them among the people of his village to be used while purchasing to avoid plastic bags. Ahmad helped reduce the use of plastic bags which are harmful for the environment. Now, most of the people of his village have made it a habit to use bags made of clothes.

During this holy month, Ahmad, with his beautiful works and behaviour, has made wonderful example of love to his country and its environment. This was his resolve which helped creating environmental awareness on which our religion also urges. He used the virtues of this month in sending the environmental message to the people of his village and changed their behaviour and practices. This resulted in some other neighbouring villages adopting these ideas and positive practices. This helped in conserving the ecosystem and reduced wasting of natural resources.

In each of our villages, we must have people like Ahmad to become torchbearer of these positive ideas which help in development of the society and protect various other aspects of it. Instead, in all of us, there should be a part of the personality of Ahmad who with his own hand served his beloved country. The protection of the environmental and natural sources of the Sultanate is responsibility of all.

## Green Arms

**T**he arms that work to build their homeland are noble arms. God Almighty has given them the wisdom and the ability to act. They are the arms that exert the right thought, noble nature and beautiful deeds. They are seen giving their time, efforts and wealth in order to see Oman among the ranks of developed countries. Their perseverance, diligence, sincerity and the ability to defy challenges enable them to work towards the progress of this dear country.

The «Al-Jabal Al-Akhdar Volunteer Team for Environmental Awareness», which recently launched its national campaign under the name «Zahya - Bright», is one of the green arms of this country. The purpose of this program is to make Al-Jabal Al-Akhdar a tourist, environmental and economic destination. It also aims to promote the destination, which has always captivated the hearts and minds of local and foreign tourists, and its beautiful green landscape.

The environment of Al-Jabal Al-Akhdar has been affected as a result of natural and human factors. This has adversely affected the natural and environmental system of the region. The erroneous behavior by some tourists has led to a slight imbalance in the ecological composition of the mountain and has affected the rare environmental elements of this unique destination. This is a great concern for the people of this region. They have realized the importance of restoring and preserving the environmental and natural elements of the mountain and promoting its development. Therefore, the national campaign «Zahya - Bright» aims to restore the former richness and beauty of Al-Jabal Al-Akhdar.

Thanks to “the Green Arms” volunteers of Al-Jabal Al-Akhdar for their continuous environmental awareness campaigns to protect the mountain ecosystem. Thanks to all the sincere Omani volunteers who have participated with various teams and voluntary associations to preserve the environment of this country. Thanks for their valuable time, efforts and funds. After all, the building of the nation is only realized through the sincere efforts of these volunteers.

## Sorry, my dear environment

**S**orry, my dear environment, I did not respect you in the past, I have polluted you by throwing dirt and garbage on the ground. It distorted your beautiful view. Please forgive me. I did not realize your importance. I understood this only when I saw someone throwing waste on the street. It was only then when I felt that this behaviour was wrong which does not have any relationship with our practices, traditions and religion. Now I regret and pledge that from today onwards, I will maintain your cleanliness. «I will tell my colleagues at the school that preserving our environment is our duty. I will do everything in my capacity to make you clean from all contaminants and pollutants.» This is what young Ahmad said in one of the live radio programmes ‘An Apology’ broadcasted on the eve International Day of Apology, celebrated in some countries of the world recently.

The apology of Ahmed from his environment in that program made the most recent shift in apologies or confessions made in that program. Earlier most of these apologies were from loved ones, friend, father or mother. While the apology of Ahmad surprised the presenter of the programme due its nature as well as the importance of this apology which was completely unexpected. This led to the presenter thanking Ahmad telling him: “From today I am opening a new page with your environment.” The presenter of this programme congratulated Ahmad and other children of the society for their awareness and sensitivity level towards their environment as well as their efforts to correct their wrong behaviour towards environment and move to instil spirit of environmental awareness in the society.

Ahmad is a simple example of environmental awareness in the society. With this one can guess the children who have understanding of the importance of environment and want to protect its natural resources. It is important for us to develop the spirit of collective work and volunteerism, and social environmental awareness to ensure that there is right dealing with all the components and elements of Omani society either they are environmental, cultural, social, behavioral or educational. This is because, according to the latest population statistics, the percentage of children is rising in the Sultanate of Oman. We should focus on this segment of population because it will soon become the foundation of the state on which its pillars would be built and aims and objectives would be set. We have to focus on their education with correct curriculum and provide them knowledge about sciences and arts of life which help them in their dealings with all new technological interventions. We have to train them through awareness programs in various scientific, environmental, social, cultural and economic areas.

Ahmed and other children are our responsibility. We must build them with correct and perfect structure. We must teach them the right methods in dealing with different areas of life. This is not the responsibility of just the government organisations. All sectors of the society including government, private sector, sports clubs and educational institutions, should join hands to play direct role in the development of scientific and practical knowledge among the children and youth. This is also necessary to develop patriotism, sincerity, willingness to work, brotherhood and cooperation with their beloved and benevolent country. It is also up to you, dear fathers, brothers, mothers or sisters to instil the spirit of sincere work in all areas of life among Ahmad and children like him. You have the huge responsibility of rightly nurturing the coming generation. If you would ignore it, only you would be held accountable. Therefore, it is a must for all of us to cooperate and make our children like Ahmad protectors of the homeland.

## Approach of awareness campaign

**A**wareness campaigns are essential for the conservation of environment. Many environmentalists adopted scientific approach to solve environmental issues and problems. When asked about the problem of pollution, one of the environmentalists said: “The solution lies first in the public. Half of the problem will be solved with their awareness. This is because the human being is the primary cause of this problem.» Awareness campaigns have become the focus of the governments and environmental organizations. The awareness is on the top of the global agenda. Success of many environmental experiences indicate its importance. One of the most important such experience was in the United States of America where awareness campaign was launched to educate people about the sources of pollution. The campaign was successful. In the beginning, a number of scientific studies of this issue were carried out which found that children were the primary cause of these pollutants. Therefore, 12 films were produced by Walt Disney and were screened in all of the schools. After the passage of certain period, the success of this campaign to create awareness among children in reducing environmental pollutants was evident. Similarly, the awareness campaign launched by India to solve the problem of drought in six years was successful. Sweden's three-month awareness campaign to solve the problem of solid waste, and similar other successful campaigns and scientific models implemented by many countries helped in development of extraordinary scientific approaches for environmental awareness.

Environmental awareness has a modern scientific approach which should be at the forefront of such programs. These campaigns must be based on well-studied methods so that it become successful in achieving its objective. One of parts of the environmental process is environmental education, information and awareness. The environmental awareness approach should be based on analytical scientific studies to find out the causes and factors of the problem. Then there should be a short and long-term plan implemented according to the ideologies which correspond with the natural, cultural and cognitive factors of the society. Only after that, the results of these campaigns must be monitored to know what is achieved and where it lacked. It should be through scientific data prepared specifically for these campaigns. At the end, new plans to address this issue should be developed according to the outcome of the previous campaigns.

Many of the awareness campaigns being carried out currently in many countries around the world, particularly in the developing countries, are without a well-thought-out scientific approach. These efforts are being made without knowing all aspects related to it, its causes and its historical trajectory. This is the reason such campaigns fail and some of them give just temporary success and with the end of the campaign the impact also disappears. Many, during these campaigns, focus on certain media platforms, namely newspapers, radio and television. But they ignore other means of direct communication and awareness such as lectures, exhibitions, seminars and workshops, digital media like internet, short messages on smartphones (SMS), as well as billboards on roads and advertising in newspapers and magazines, social media. This is despite the fact that they have direct impact on various segments of society, particularly youth. Therefore, the awareness campaigns should be implemented in accordance with a precise scientific approach to achieve the long-term goals. Those who launch campaign should differentiate between mass media awareness campaigns, public awareness campaigns, trend modification campaigns and behaviour modification campaigns. This is because for each campaign there are specific objectives, contents and approaches. The awareness campaigns should be integrated with the scientific methods to achieve their goals and long term results.

## Human and the change !!!

**C**hange is part of life. It is a goal and not the means. A human understands the goal to move from one phase to another, and get positive results and achieve development. Sometimes, change becomes a mean used by a human to meet some of his or her daily needs. But if they are not very aware of the change and do not realise it, it quickly disappears and the human being becomes what he was before the change. Therefore, human change is a cognitive and persuasive concept based on clear foundations and has stability based on the positive approach with the benefits of the surrounding environment.

This is the change of the human being this time which is being emphasised upon and talked about in the global environmental celebrations. Recently, the world celebrated the Habitat Day, with the theme «Better City, Better Life.» It focused on the role of human being in changing the city through its migration from the countryside to cities, their use of daily facilities, and their interaction with urban lifestyles. By its habits and dealings, the human being is considered to be able to make his city better so that his or her life also can improve. The world also celebrated Arab Environment Day under the theme «Sustainable consumption is the responsibility of all», focusing on the way people consume different resources of life and positive and negative effects of this consumption. If consumption is random, the results will directly affect natural and biological resources. If it will be calculated and rational, it will ensure the survival and development of daily biological resources because it is the responsibility of all. So all of these things depend on the way people deal with them while in daily use in different walks of their life.

In Arabic language, the verb generally precedes the subject and the object, except in certain situations. In the daily life, the subject is often preceded by the verb. But the object in all cases is something which was affected by the verb or the subject and comes later. The natural and biological resources are the object. In general, the human being is always the cause of the destruction of natural resources, and at the same time he is able to protect and maintain them and work on their development to ensure their survival and continuity. Therefore, man is the focus of the process and its transformation from negative behaviour to positive behaviour which marks as the starting point of the correct beginning.

We do not need to laud this positive change day and night. What we need to do is to first and foremost realize that this positive change will be in our favour and it will bring us a life of dignity and happiness. If we understand the concepts of positive change, we will bring changes even a small percentage but for the better. Therefore, we must cultivate the seeds of positive change in society and life in our sons, brothers and all our friends and loved ones, so that one day it will bear fruit and its results will be white and green which will play a crucial role in sustainable development of society.

# Chapter Five

# Environmental Issues



# Sustainable Development

**T**he concept of sustainable development has emerged as a necessary global concept that has led some countries to set their strategies and plans in line with their requirements and objectives. It links the needs of the current generation to the future through the optimal utilization of renewable and non-renewable natural resources without damaging them. The concept also maintains such resources through sustainable ways that ensure human rights and the rights of the surrounding environment. The environmental dimension constitutes the most important main axis of this concept; in addition to the economic and social aspects because the environment is the basic premise in which human beings live daily. Man influences the environment and is also influenced by it.

The World Countries have sought to scrutinize this concept amidst the economic and technological revolutions that influenced the environmental aspect. The results of such advances have been reflected in social aspects. However; these countries became aware of such matter and sought to find a real balance between the economic and environmental development. The countries have enacted environmental laws and legislations to maintain their natural resources against exhaustion, damage and extinction. Despite this fact, a conflict still exists between the two aspects amidst economic, commercial and technological ideologies that imposed its existence in this life.

The Sultanate is a leading country in terms of achieving the objectives of sustainable development. It has sought earnestly to find a balance between the economic and environmental development. Furthermore; Oman has linked the implementation of development projects in various fields with the environmental consideration out of its recognition that paying attention to the environment and the human health is one of the most important pillars of future development.

## The Green Economy

**T**he discussion related to the term of “Green Economy” intensified for a long term, some of them see that it is nothing more than an economic term, invented by the advanced countries to market the products of Their big intercontinental corporations, in order to increase their profits, and to be able through this term to market its products in the countries committed to the international environmental agreements.

As for the other side, they see that it is highly important to apply this environmental method in all over the world for its positive and touchable effects in improving the environmental situation, and for it guarantees the continuing raise in environment health indicators, as it depends in all its directions on the best use of the environmental system and preserving it. Despite the methodological and conceptual collisions in the matter of the Green Economy, there is no doubt that it contributes in a direct way in the positive raise in the rates of the environmental growth in the countries that adopted this matter and worked on applying it, the green economy seeks finding a real twinning between all the sectors of society especially what is between the economic and commercial fields and the environmental one, so that it can conserve the biodiversity and fungal diversity, decrease the emissions of the harmful gas, runs the industrial waste in a scientific ways, and contribute conserving the whole environmental system with all its fields.

The Green economy is also considered to be the link between the three dimensions of the sustainable development, which are: the economic, social, and environmental dimension; in addition, the final document in Rio Conference for Sustainable Development that was held in Brazil 2012, assured that it is highly important that the countries adopt the Green Economy’s policy, for it contributes eliminating poverty all over the world, works on achieving the sustainable development in a way that is enough to maintain the wellbeing of the human and environment, and to develop the economic aspect of the countries. The Sultanate is one of the countries that paid attention to the concept of “Green Economy”, as there are excellent efforts in this part; still, we hope that one day there will be a real partnership between the private and governmental sectors, to crystallize the methods and visions of the green economy, also for the availability of real contributions on land by the private sector in carrying out the environmental developmental projects, where the considerations, environment systems or their social contributions in the environmental initiatives are appreciated, for achieving the Sustainable development is by applying the systems and the indicators of the Green Economy in the State.

## The Upcoming Environmental Hazard

**I**f we speak in words and deeds, we are living today in an imperceptible environmental and health threat which is the “Plastic Bag Risk” in the Sultanate. This is a long-term danger if we do not find the right health, environmental and legislative solutions, as well as the right alternatives for plastic.

International statistics estimate that the world consumes 500 billion plastic bags annually and only 1% is recycled worldwide. Here in the Sultanate, the statistics carried out by the Environment Society of Oman indicate a real environmental problem. Muscat alone consumes about 6 million plastic bags per month, an average of 200,000 bags per day, often ending up as harmful waste or used as garbage containers before being thrown into containers and sent to landfills.

Plastic bags are thermoplastic materials made from chemicals and petroleum-based materials and have significant damaging effect on human health and the environment. Scientific studies indicate that one plastic bag needs to 100 to 500 years to be decomposed. Plastic bags have direct negative effects on plants, soil, marine life and groundwater. They also affect human health and interact with hot foods and cause many chronic diseases such as cancers, genetic abnormalities and psychological diseases.

There are a number of solutions that many countries have done to avoid the health and environmental problems caused by the impact of plastic bags. In this regard, the use of plastic bags has been banned completely and financial taxes have been imposed on each plastic bag while providing environmentally friendly bags in accordance with environmental standards and specifications.

The Sultanate has also exerted efforts in this aspect from various government agencies concerned with this issue. However, these efforts are still very slow and need to be activated and implemented. There is also no clear response from the private sector in solving this serious environmental problem. It takes a big and firm stand by the public and private sectors, because plastic bags pose a serious threat to human health and the environment in the Sultanate. The use of plastic Bags is increasing day by day without adequate solutions and alternatives. In general, the next threat to the Omani environment is that of plastic bags.

## Thrown Garbage is a Real Threat

**I**t hurt so much to see the garbage and dirt that fill the beaches, parks, gardens and tourist attractions that are left after at the end of each entertainment session carried out by families or individuals. People leave behind uncivilized view. This is a bad towards their country and their environment, which constitute a real threat to the system of hygiene and environment in the Sultanate.

Such behavior carried by families or individuals who leave their garbage at the same place of their picnics and comfort, is considered a dangerous curve in instilling non-benign values which will take root in the minds of children. Children will consider such behavior as natural and that the preservation of the environment has nothing to do with religious or cultural values. Thus, such behavior will be reflected on their behavior and way of thinking in the future. This must make us feel concerned about this great haunting phenomenon which is widely spreading in many circles of the Omani society.

The shocking and surprising matter is that most of the families and individuals, who engage in such behavior, are people of considerable scientific and cultural levels. This fact needs other dimensions of analysis and thinking for such behavior that is contrary to the teachings of our Islamic religion, and has nothing to do with the values the Omani society.

Addressing this dangerous phenomenon has become a matter of urgency in the light of the bad behavior towards our environment and natural resources which we see every day. It is also our duty as members in this society, to make the good example for our children and our brothers in adopting positive behavior consistent with the teachings of our Islamic religion which commanded us to remove harmful objects from the street. Our religion confirms that preserving the ecosystem is a right behavior in life for us and for our future generations.

# Geotourism

**T**wo hundred scientists and researchers from 25 countries of the world are doing experiments of simulation of life on Mars in the desert of Dhofar governorate of the Sultanate. They have chosen the Sultanate from among various countries of the world to do such scientific experiments of international importance. This gives us a sense of pride and creates self-respect because the Sultanate was recognised for its unique Geotourism and scientific components of global importance. These are the geological scientific treasures of knowledge which were not explored earlier.

This is Sultanate's unique topographical, ecological and geological diversity which has made it a place of attraction for scientists and researchers who wanted to explore the nature and space. This is part of the achievements made by the blessed renaissance which started under the wise leadership of His Majesty Sultan Qaboos bin Said. It is His Majesty The Sultan who recognised the importance of scientific development of the country in various areas of knowledge as means of growth of the society for a better future.

This experiment would open up horizons for government and private organisations and institutions as well as the civil society for scientific research and investigation of the projects which are distinct with the Sultanate. At the sametime, it is a new way for the development of geological and scientific tourism in the Sultanate. The environmental and geological components of the Sultanate, which include vast deserts, high mountains, caves with unique geological importance, wadis, sand dunes, beaches, aflaj, forts and historical and geological heritage, have opportunities for tourism investment in a way which preserves society's identity, history, scientific integrity and knowledge base.

We hope that the simulation of life on Mars will bring unique and positive scientific results and place the Sultanate in top of the world in scientific research. Similarly, the Sultanate would continuously have such scientific activities as due to the unique geological and environmental treasure.

## Balance of power

**T**he struggle between development and the environment has always existed. Economists demand a lot of urban, commercial and technological expansion at the expense of natural and environmental resources. They believe that the growth and progress are achieved through rapid development for increasing income. Whereas, environmentalists urge that the technology and economic projects should not overlook natural resources. If this infringement continues, this can cause massive destruction of the earth and degradation of ecosystems.

What raised the subject to my self is the request of one of economical investors to the sultanate to reduce some environmental rules, terms and conditions imposed on investors to facilitate more investments in large areas of lands, wadis and mountains. There are certain conditions which make mandatory for the investor to protect natural resources and do safe dumping of solid, liquid and gas wastes. They think that the development of the country lies in increasing the number of large factories and attracting foreign investments for industrial projects.

We are not against rapid development and technological advancement. But there has to be a balance of power between the development and environmental and natural resources of the country, so that one side does not dominate on the other. If balance of power between the two axes is disrupted, it would destroy ecosystems. There are many global examples where there were development which disregarded the environmental aspect. The result was that they lost most of their natural habitats. Vegetations were totally destroyed. There was also extinction and degradation of wildlife. Now they are spending millions to restore their natural ecosystems.

The Sultanate, thanks to the wise vision of His Majesty Sultan Qaboos bin Said, has recognised its importance since the beginning of the Renaissance. The development and conservation of natural resources were made two parallel lines which are together in the developing the country. Therefore, It is imperative for us, as government organisations or private institutions, to complete the process of building and development, and to maintain the balance of power between development and environment to preserve the ecosystems and wildlife of the country. This is necessary if we and the future generation have to enjoy a clean environment free from all kinds of pollutants.

## Alarming numbers

**I** was not expecting that the consumption of plastic bags in the Sultanate will increase to this level which become a real threat for environment and health. Every major commercial centre in the Sultanate consumes 40 million plastic bags every year. It means that if there will be 10 large such commercial centres in Oman, the consumption of Plastic bags will multiply to reach to 400 million. This is in addition to small retail outlets, restaurants, coffee shops and other private sector establishments. Eventually, these bags will end up in landfills, roads, seas and wadis, or burnt with some other wastes by expatriates in farms and wadis.

These figures are very scary. The real environmental threat posed to the Sultanate is plastic bags because of its negative effects on human health, environment and other organisms. This is because they are made of petroleum and chemical substances and derivatives. They pollute seas, wadis and tourist destinations. This is why, the United Nations Environment Program launched «Overcoming Plastic Pollution» as the theme of the celebration of the World Environment Day. This is in recognition of the fact that plastic has become one of the major human and environmental threats around the world.

The government in the Sultanate is making huge efforts to limit the use of plastic bags and replace them with other bags which are environment friendly. We are expecting specifications and standards so that these plastic bags do not harm humans and environment and degrade quickly. We are waiting for the decision in this regard to rescue us from the environmental problems. We also call upon private manufacturers and importers of plastic bags to join hand with government agencies in implementing the decision and adhere to the specifications and standards of the new eco-friendly bags.

Until the decision is issued to remove the fear of the threat of the alarming plastic bag consumption in the Sultanate, we on our own should be rational and reduce the use of plastic bags, and find other alternatives in the interest of our health and the environment.

## The Culture of Waste separation

**T**he culture of waste separation (plastic, food, cardboard, medical, electronic) is a culture that is somewhat absent within Omani society. This may be due to the fact that government authorities did not adopt the concept from the outset. They adopted garbage collection on large garbage containers that were distributed in residential neighborhoods, so that the general public would throw all the garbage together in those containers. These materials are then collected and disposed of in the known ways according to the healthy and environmentally sound principles

The latest awareness campaign launched by Oman Environmental Service Holding Company S.A.O.C (Be'ah) on the subject of waste separation is very important in its content for health, environment and awareness. It indicates that the separation of waste is urgent and necessary to protect health and environmental for the humans and the environment surrounding it, as well as the economic and investment returns that can result from the separation processes. However, the awareness effort remains deficient if it is not compatible with the practical application by providing separated containers in all residential districts in the Sultanate. Each container to be designated for a specific type of waste, in addition to the cooperation of other government agencies and private sector institutions specialized in this field to implement the same method.

There are very successful global experiences in waste separation, intersecting work between government institutions, the private sector and individuals. Therefore, the subject of separating the waste is part of the daily behavior of the community. The individual starts the process of separating the waste on his own because he is accustomed to it from the beginning and realized the importance of this process for the health, environment and the investment in such separated waste that benefit him, the community and the environment around him.

It is not easy to instill and solidify the concept of waste separation culture in Omani society, but it is not impossible. The Possibilities and the essence of culture exist. We only have to intensify awareness campaigns to begin practical application.

## Space as a repository of waste !!!

**W**hen one of the speakers on environment in one of the Arab countries said that the space would be a repository of waste in the near future, one of those who was attending the lecture responded with a surprising question asking that if the land is now filled by wastes and that now we need space to be dumping ground for our wastes and garbage and that it is the end of our warm relationship with the earth. On the other hand, we see a television scene of one of the western films. Presenting a dialogue between a son and his father in the car, the son wanted to throw an empty box in the street and the father told him that if he threw it in the street he would end up paying a fine. When the son further asked question, the father convinced him that it was to protect cleanliness of the environment as it is one of the practiced method to reduce the cases of throwing wastes and garbage on the streets and not at the space allocated for it.

In these two scenes, we see the reality of how the waste is treated in the Arab countries and the western countries. Many Arab countries do their best to preserve their environment through awareness campaigns in various media outlets, as well as by enacting laws and legislations for industrial and commercial establishments only. They only prohibit throwing away of wastes and call for benefiting from recycling. But very few of those facilities are optimally recycling and using their waste in best manner. In the Western countries, in addition to what the Arab countries are doing, they are enacting laws and applying them on individuals in the case of throwing the waste in a place other than the place allocated to it and making the pay fines. It creates consciousness and self-awareness of the importance of maintaining the cleanliness and health of the environment by not dumping waste in the streets.

One of the media reports has suggested that Seattle residents consider throwing empty bottles on the road as harming the safety of the planet earth. It has made the waste recycling compulsory rather than voluntary, as one of the most effective solutions for saving the environment. It has made the law which says that the wastes and garbage companies cannot use the wastes which are left in garbage boxes some materials which are recyclable. Most of the western countries give incentives to people recycling their wastes. Most of the environmental and hygiene agencies have hired people to make people aware of the method of improving their performance on in waste recycling. They provide people practical training in their homes. The teams of these employees visit the residents, train them about how to deal with liquid or sold wastes. They also teach them about the right scientific methods of recycling and equip them with the tools and equipment which help them in the process.

Those who follow the measures taken in the western countries, their laws, guidance and material incentives given to encourage citizens for protecting cleanliness of their environment and recycling of their wastes understand that this is the responsibility of the government to create this type of awareness. It is the government which makes them aware about the importance of the health and cleanliness of the environment in various ways. They understand that the awareness of the citizens is the two-thirds of the work done in achieving the objective of the government to maintain cleanliness of the environment as this is the basis of development of the society. Here we do not ignore the efforts made by the Arab countries to protect the cleanliness of their environment. But there are certain level of lacking of the sense of responsibility in the individuals. But at the same time, we do not blame the individuals only. We must recognize that there is a gap of knowledge and understanding which reflects between Arab governments and civil society organizations when it comes to preparing a draft for encouraging citizens to show concern towards environment as a real partner in legislative and executive process of these projects of which ultimately they would be the beneficiary. It is for maintaining a clean Arab environment free from all kinds of pollutants. This is because the environment is not only our right, but it is also our responsibility towards our coming generations which could hold us accountable for our shortcomings.

## Strange environmental habits

**W**hen one of the Chinese sages was asked what he is doing early morning after waking up, he replied wondering: Do I start my morning without smelling roses? It is my habit since 30 years. I could not give it up because it gives me strength, vitality and optimism all the day. The books of literature and language tell us that it was a behaviour rooted in social, cultural, ideological and genetic factors of the person which he practiced in his or her social environment. It results in certain conscious actions which with the passage of time becomes unconscious acts of a person and becomes a major part of his personal and public life.

There are various practices and habits of the people or tribes which may be positive or negative which depends on the nature of the act and its consequences. What attracts me more in this subject is that there are certain habits of some tribes which are positive towards the environment. These habits and practices increase the intimate relationship between humans and its environment, which we wish to continue. In one of the tribes in the Caribbean islands, the tradition is that when a child is born there, the people plant one coconut tree for every child born, but in the case of the death of any person, the people plant one mango tree for each person dying there. In an Australian islands, the law requires every person who marries to plant five different trees. In divorce, the same law requires the divorcing husband to plant 25 trees. In the Maldives, some tribes cultivate three trees each month as a way of getting closer to nature as they believe that they give them a lot of livelihood for their daily life.

These positive habits of some tribes and individuals have contributed to the beautification of the environment and harmonizing them with their ecosystems, which have restored its balance after it was lost to the industrial and technological revolution. But if we now look at the practices of some villages and cities which have negative effect on the environment, we wish that some of these positive practices could become popular there to support ecosystems of the environment. So we say, as environmental advocate Arnold Halmer has said: “we hope that an international organization concerned with the environment will adopt some positive habits which further strengthen the relationship between human and the environment and spread it to all countries”. Here, we invite not only environmental organizations, But to all governmental and private institutions as well as all non-governmental organisations and individuals to help in developing habits which are positive to their environment, even such as planting a tree in a year. This is because if in each country a thousand people will adopt this habit, they will have a thousand new trees added to the environment of that country. We can start an awareness campaign with the participation of the public and private sector and individuals urging every individual to plant one tree during just three months. You can guess how many new trees would be added in this period. Suppose if we continue this campaign for a year, how many new trees would help us in restoring the ecological balance of the nature.

## Where are the Arabs' from environmental initiatives?

The world today takes many scientific initiatives and do experiments which is widely promoted by advanced countries to increase their economic and scientific productivity or to market their global reputation in a particular area or for their welfare initiatives in the interest of humanity to minimize the effects of the industrial and technological revolution. Those who took these initiatives have won encouraging international awards for their services to solve many global issues. This is in addition to their opportunity they get for marketing their initiatives globally through the media or through transnational companies, which often adopt these initiatives and pay their owners millions of dollars to improve their reputation and market their products better.

These initiatives are voluntary and involuntary act initiated by many principles and human values of individuals or institutions with the aim of reforming or assisting in the reform of a particular system or values which results in the real re-balancing of life and helps in resolution of many humanitarian issues, including those which are social, environmental and cultural. Today, the world is moving towards economic and environmental initiatives and away from political initiatives. These stakes are now diverted from economic initiatives because of the self-sufficiency of some countries and companies. Those who took environmental initiatives have been doing this due to humanitarian reasons and their love for the environment and the nature in which they live.

Recently, we have noticed that several global environmental initiatives have emerged. For example the initiative of the Government of Indonesia which had made it mandatory for the prospective marriage in one of the Bali regions to plant five trees to protect the climate, and 25 trees on those who wish to divorce. Similarly, the initiative of the British government which led to innovation of environment friendly lamps has reduced energy consumption and limited greenhouse gas emissions. The Japanese companies took initiative and invent eco-friendly cars which reduce carbon monoxide emissions. A Seattle city of the US took an initiative to encourage people to collect and sort solid waste for recycling. The protests of the people of Italian Naples against garbage dumps on the streets forced the government to expedite their disposal. The Koreans' protest against oil spills of some ships sitting in their seas also brought results.

It is noteworthy that these environmental initiatives are of advanced or industrial countries. Unfortunately, Arabs are nowhere in these initiatives. This is despite the fact that these initiatives do not demand huge money or any complicated technologies. How long Arabs would not come out with their own initiatives. For us, as Arab countries commitment to environmental cause is just celebrations in its name or participating in international events related to it and getting media attention. But the fact is that participation in environmental events do not mean just highlighting in media only, but it is its implementation in reality on ground. We also do not undermine the Arab countries who are working on some of their own environmental initiatives. They have studied them for many years make them a reality. But at each meeting there is a disagreement on some point in this initiative, whether due to different environmental laws or legislation or because of some other reasons. This leads to postponement to the next meeting so that these initiatives become ready to be implemented. If the difference become more intense, these initiatives are kept in cold storage waiting to see the light of the day after initial agreement on the point when there was differences appeared on this initiative.

It is a must for us, as Arab and developing countries, to stick to the initiatives of some international environmental organizations to reduce greenhouse gas emissions and climate change. These initiatives are not applied in the big counties to protect their economies and factories. As Arab countries, we remain just wondering about global environmental initiatives and try to implement them with full commitment. It is now on the Arab countries to come up with new initiatives to protect our Arab environment from all types of pollution. For such initiatives encouraging awards should be given to those individuals and institutions who would adopt them and spread them at national and regional level. The Arab countries should provide suitable environment to these initiatives and give them legal, administrative, material and scientific support which would encourage individuals and insinuations to produce and open the field for specialized environmental research and studies which will be the scientific basis for these initiatives to clean Arab environment.

## Environmental police

**M**any international and regional environmental organizations have formulated laws which guarantee protection of human being and environment around them from all natural and human hazards. These laws if followed ensure stability of the human race and improve its standard of living and society. As a result, environmental conventions and agreements were signed by most of the countries of the world according to certain conditions and principles to achieve the noble goals to protect human health and living in a safe and clean environment free from all types of pollutants. Those conventions form the environmental base for the countries of the world. In addition to this, these countries have their own internal environmental laws which are in live with their own interests and are according to their own systems, and social and cultural ideologies.

However, the issue remains is the perfect application of these international environmental laws which has been a matter of controversy between rich and poor countries. Some countries have worked harder and have done well in the internal environmental regulations and legislation. This is because some countries have their own national sense of responsibility towards creating a clean environment for the human being and bounties. There was also an Arab initiative launched by the Hashemite Kingdom of Jordan. It formed an environmental police which provides guidance to the government by imparting its responsibility of finding applicable and logical alternatives to implement environmental laws in the local society. This all to achieve a clean and healthy environment which helps individuals to build a better society. It also works to increase environmental awareness in the society and consolidate of the concepts and principles of conservation of environment and is natural resources in various means and ways.

If you will visit the Jordanian city of Amman and its surrounding, you would find some police officers, wearing black uniforms standing at the crossroads, registering cases of violations and levying fines of 20 dinars for throwing garbage on the ground and 200 dinars for non permitted tree cuttings. These fines reaches to 50 thousand dinars for factories which leave toxic waste. When you would see the environmental policeman, you would understand the national efforts for environmental security based on laws and legislation implemented on the ground. This works as a deterrent if anybody in the society thinks about harming the environment in any way. It guarantees the right of environment and its natural resources and protects it from all types of contaminants and pollutants. It makes a panorama of collaboration between the government and individuals from society in creating a joint effort to achieves better environmental security. This environmental security initiative is consistent with Article 22 of the Universal Declaration of Human Rights, which stipulates that “Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.»

The Jordanian initiative to create environment police is an example which should be followed by the Arab countries to create a new environmental security framework implementing international and national environmental laws and legislations to protect human health and the environment around it. This experiment should also be taken into consideration at meetings of Arab ministers responsible for environmental affairs as a support to this experience and as an effort to get benefit from it and make it popular in the rest of the Arab countries. It is a pioneering experience in the area of environmental security, which helps the governmental environmental bodies and volunteer organizations in the environmental conservation work in a new logical manner. This experience should be discussed in global and regional environmental conferences and seminars as a new environmental security initiative which guarantees full rights of human being and the environment and restores ecological balance of nature.

## Latest news !!!

**E**nvironmental observers have realized and focused on the issue of pollution in all its forms and types, especially industrial pollution and its negative effects on human health and the environment around it. Many of them have described that there is a hostile relationship between human health and industrial pollution. They also termed it as dark relationship. But some of the environmental observers such as Holster and Proteus focused on the «element» which leads to pollution. They described it a substance or effect which leads to a change in the growth rate of environmental species. It becomes inconsistent with the chain of food when toxins introduced into it or it is contrary to the health, comfort or the values of the society.

Recently, when an Arab news agency reported a «Death due to Pollution,» it caught major attention. The news item was about the death of an Arab youth in suburb of one of the Arab cities. The youth has died after drinking water which had toxic chemicals and radiation substances. This incident has caused chaos and unrest in the city. It prompted a number of journalists and environmentalists to compile a complete report on the cases of pollution in various cities and regions of that country. It revealed many violations and abuses of environmental laws. Among the things which had went unnoticed since 2005, was the death of around 5,000 people due to the increase of carbon dioxide in the air, and about 555 m<sup>2</sup> of contaminated industrial drainage pouring into one of the rivers of that country annually.

This was one of the case of industrial pollution in the Arab countries. There are also day to day violations in the form of chemical, radiation and biological pollutions as well as those caused by wars etc. There are many other daily practices which goes unnoticed as we do not realise their implications in future. Shouldn't we open debates on environmental pollution in our Arab countries, particularly when we are sure that they are causing deaths? Should we cover up negative daily environmental practices which threaten human health just for the sake of influence and power? Despite this cover-up, the day will come when the issue will appear with the demand for fair solutions and equality in terms of compliance with environmental laws.

Many studies and scientific research have proved the link between pollution and chronic diseases such as cancer, asthma, cough, and congenital and genetic malformations. The most recent of scientific research was conducted by the University of Texas, USA which reported a significant link between the incidence of leukemia in Texas and life near the oil refinery and the port of Houston. Similarly, a specialised European institute conducted a study in 26 European cities and came to the conclusion that reduction of pollution could help avoid 22,000 deaths in these cities. There are many other scientific studies which confirms the serious damages to human health and its relationship with the industrial pollution. Therefore, before there is another headline in the media about “Death due to Pollution,» we have to turn to the issue. The Arab countries must take the initiative to emphasize and control how to implement environmental legislation and to set up specialised committees to study the environmental conditions in all regions to reveal environmental problems and find appropriate solutions before the situation goes out of control and results on huge consequences. It is a must that the environmental legislation in the Arab countries is consistent with the modern technological developments the world is going through today. This is necessary to keep pace with the compatibility between industrial and technological development and the preservation of human health and its environment.

## Chapter Six

# Climate Issues



# Climate Funding

**M**arrakech Document, that came out of the United Nations Climate Change Conference (cop22 ) held in the city of Marrakesh, Morocco last November, stressed the importance of concerted all the world's efforts on the subject of climate change, reducing the harmful emissions, the importance of the green economy in achieving sustainable development, as well as the emphasis on clean energy, promoting technological and economic aid to developing countries, besides emphasizing the importance of implementing the commitments and recommendations of Paris Convention for the Climate that have been adopted in the Global Climate Conference held in Paris, France, 2015.

Perhaps what dominated this conference from the view-point of economic analysts, is the increment in the amount of money approved financial funding estimated by billions of dollars, committed by developed countries, oil countries for developing countries, part of which is what collected for the funds that have been approved, or as financial aid, or projects implemented by the transcontinental companies. Countries were obligated to pay \$ 81 million for the Adaptation Fund and \$ 23 million of the Center for Technology Network, as well as the endorsement of the Green Climate Fund on projects worth \$ 2.5 billion, the launch of the Marrakech Commission Investment Fund in order for Adaptation with a value of \$ 50 million, the launch of the European Development Fund projects worth Euros 4.1 million for the public sector, 44 billion for private sector investment in Africa and the European neighborhood, the endorsement of the global environment Facility (GEF) to implement more than 30 projects to reduce emissions and transfer technology, valued at \$ 188.7 million, along with millions of dollars adopted by international companies to support green capital markets in Africa.

The success of the Marrakech climate conference was very distinct in putting in place a new road map for the world to mitigate the impact of climate change and its causes. The recommendations, vision and document that came out of the conference aim to clear things up. That will be a new course in global negotiations to this topic, which has dominated the global environmental agenda. Nevertheless, that must not face the fate of such important global conferences and turn into a purely economic struggle encapsulated in an environmental cover, controlled by global transnational corporations which seek to implement its own agenda under the pretext of clean technology, capacity-building and humanitarian assistance.

## Our Air for whom !!!!

**W**hen an environmentalist shouted on someone who said that the environment treats itself from time to time as a doctor who diagnoses and treats himself easily. Perhaps he has realized that the inevitable developments he had experienced at that time and the future visions of evolving environmental technologies would change in view of the globalization of the environment and the new environmental challenges on the international scene. This man has then grasped the thread of the beginning which we are experiencing now and would continue for long as there is no baseline to stop this dangerous depletion on our environment from time to time.

The environmental baseline today is what we consider as the unfortunate indicators of environmental degradation or the continuous pollution of our atmosphere without awaring on the huge coming crises. It is a clear sign that we have become immune to the scale of the impending catastrophe which ecologists say that one day our sky will cover of a cloud of smoke as a result of increased pollutants in the atmosphere. The problem has been compounded due to the recent increase in scientific progress and the continuous development of modern technologies and increase in the number of vehicles and means of transportation. Similarly, heavy oil, petrochemicals, manufacturing and heavy transport vehicles using diesel are an important source of sulfur oxides and nitrogen oxides and other gases which affect our atmosphere and interact with atmospheric effects such as moisture, heat and wind and directly or indirectly affect human being, environment, tourism, recreational activities. It also affects the cycle of life of the plants and animals and thus affects the natural and wildlife in general.

The another thing which should be tackled is the increase in air pollution by gases emitted from power plants, which have created a number of dangers, including acid rain, climate change and heating of atmosphere. Therefore, we must make the fundamental rule of increasing the efficiency of the power plants and rationalize the demand for electricity, monitoring equipment as well as the use of computer based control of the management of these stations so that all merge under better management and advanced maintenance systems. It is also necessary to continuously develop human resources and making them aware of what is latest in the area.

In Oman, continued efforts are made to take all air pollution control measures and ensure that pollution levels are maintained at the permitted limits so that it does not cause any adverse effects on the environment and public health. The Sultanate of Oman has added new mobile units equipped with all necessary tools to monitor the gaseous pollutants in the air which affect human health and the surrounding environment. There are also fixed stations to monitor air pollutants in a number of industrial and important areas. Mobile stations continuously monitor various air pollutants coming from many important sources including transport and industrial establishments. This has led to a qualitative shift in the Sultanate's interest in the atmosphere, as one of the distinguished countries interested in monitoring concentration of air pollutants in the regional atmosphere . This is done through monitoring stations in various parts of the Sultanate. It showed the country was given due importance to its citizens and the environment in which they live.

## Fraud of promotion of renewable energy !!!

**T**he cynicism of misleading the global economy was never fruitful for globalization. The misuse of money, economic and leadership power for the purpose of reform and development has become one of the ideologies of larger transnational companies which exercise all their rights with utmost freedom and simplicity. The fake claims are unleashed by the international organisations working for the protection of human rights and environment in the garb of reform and public interest in the developing countries. They pretend as if they are gentlemen who have come to do some good and extend their helping hands and support to these countries who are living in poverty, hunger amid political, economic and cultural conflict.

The fake claims of the environmental organizations working in the area of climate change and which promote International Renewable Energy Program in poor countries are nothing but one of the fruits of the economic and environmental fraud of such international organisations which were set up to protect human and environmental health without discrimination and distinction.

This claim is false because this programme given huge incentives for investment in environment friendly energy in poor and developing countries such as water-based or solar-powered energy, which will help in reducing the build-up of carbon dioxide which causes global warming due to burning of coal and oil.

The secret of this fraud is that the climate change organization knows that these poor and developing countries do not have heavy industries or factories which produce the gases which cause global warming. They are also very well aware of the fact that the main and primary sources of these emissions were the advanced countries which have large international industrial for the production of fuel and nuclear energy. Their average annual emissions of gas from their power stations, vehicles and factories are more than 25 billion tons, about a quarter of it come from United States of America. But it withdrew from the Kyoto Protocol in 2001 on the grounds that it will negatively affect its economy and productivity of its factories.

When we decipher the false claim of this program, we see economic interests of the rich countries in adopting it. These interests obviously seen when they call for preserving the global climate claiming their commitment to the Kyoto Protocol, which requires industrialized countries to reduce their greenhouse gas emissions by 5.2% from where it was in 1990 between 2008 and 2012. But this fraud remains very dangerous as we know that this program has approved the implementation of more than 200 projects of environment-friendly energy in poor and developing countries. There are about 600 other projects are still pending and waiting for approval. All rich countries support this program and scramble for their approval so that they can implement their large projects in poor countries. The program will be addition to the aids of rich countries for the projects in poor countries in their application of the Kyoto Protocol to reduce their gas production. This is another obstacle in protecting the climate, because the rich countries themselves do not implement these commitments for climate. They implement it in poor countries which do not cause global warming and climate change in the world. So the only answer of these fraud claims is that this program should be implemented in the rich countries which produce greenhouse gases, or it is removed from the list of international contributions to maintain the global climate. This is because it only serves the interests of the rich countries of the world on the cost of poor and developing countries.

## To where ozone hole expanding?

**A**t the beginning it looked like the stories of the famous Thousand and One Night, or like a fictional film of world cinema, or nothing more than fairy tales on which creative minds produced films or horror story of the Bermuda Triangle about which it is said that every ship which crosses it disappears. Same is the story of Ozonee hole over the Antarctic from where harmful solar radiation enters, as well as alien space objects which come from other planets and occupy the earth and begin to govern us according to their laws and life in space. These films and fantasy books are still published today. They became very popular among the public because they attract their interests as an escape from the bitter reality they live. This is a kind of internal psychological cleansing of individuals.

The Bermuda Triangle, is still obscure, and puzzling scientists. They say that there is a magnetic power in mountains under the sea in the region. This is what pulls all the ships pass over it to the bottom. Another issue is Ozonee hole, the scientists have refuted the idea of existence of space objects attacking the planet. They focused on the first issue which is existence of a hole above the Antarctic from where harmful solar radiation enters and causes a lot of damages on the surface of the planet earth. This is what has been proved by all scientific research and studies. The fact is that there is a hole in the Ozonee which is expanding every day causing many diseases and epidemics such as cancer, asthma, fatal deformities, biological epidemics and sudden climate changes. It is amazing to know that this hole is equal to the size of the North American continent. Its size has increased in 2007 from where it was in the year 2006. Its area expanded to 27 million square kilometers from 25 million square kilometres in the previous year. This was an increase of two million square kilometres. The increase itself was frightening and has serious consequences for humanity in the form of the spread of diseases, epidemics and increasing in climate changes surprising many countries of the world with tropical cyclones, floods, earthquakes and volcanoes claiming lives of thousands of people every day.

The global efforts to control or reduce the Ozonee hole were made through international conventions, treaties, conferences and scientific seminars. But there was no serious movement in the direction of abiding of these agreements. The Vienna agreements was to protect Ozone layer, Protocols of Montreal and Kyoto were international mechanism to stop expansion of this Ozone hole. But these agreements and conventions failed in reducing the size of the Ozone hole. Instead, the area of the hole is expanding every day. The international meetings held daily to discuss and act on these agreements in a family environment. They come, sit and discuss implementation of the recommendations, pass resolutions and make them null and void on the dinning table after the conclusion of these meetings. Those who gather here go back to their counties and push these resolutions and recommendations in big files in their safe without any action.

Doesn't the world need an international mechanism to stop the expanding Ozonee hole caused primarily by the human being by its large industries which produce Ozon e-depleting substances such as carbon monoxide, carbon dioxide, harmful gases, fumes, particles and chlorofluorocarbons. But if we look at the present time, we find that the mechanisms exist but lacked some kind of activation, commitment and credibility in the implementation. Each member state in these international conventions must take the matter seriously and open those large files which are in their shelves as a show off and introduce them to governments and private organisations to discuss, take necessary actions and implement them. This is to make sure that the world is safe afterwards and the Ozonee hole decreases rather than increases, and diseases, epidemics and climate change diminishes and people become healthy. If these large and huge files stayed in the drawers as a show off and reflect acceding to international treaties and conventions, then say good byes to the world, the Ozone layer would deplete, diseases, epidemics and climate changes would continue. The consequences would be very serious if we did not take appropriate action and this hole continued to expand.

## The poor and climate change

**T**he world is currently giving attention to the issue of the climate change and its effect on the public health as well as the level of the importance of environmental awareness of individuals and societies in avoiding the situation of rapid fluctuations in the climate and its negative human and material consequences directly effecting the economies of the world. There is a strong relation between the health and climate changes. There are many studies, research and medical reports which confirm that many chronic diseases were caused by climate change. Heat waves, storms, floods and droughts cause tens of thousands of lives every year. But the worst is that the poor and the needy are the first and hardest hit by climate change. The remote areas and island as well as developing regions are the most affected areas due to climate variability because of the lack of environmental safeguards in these places and the lack of attention to them. This is unlike the big cities which attract the attention of countries to protect them and focusing on their economic, tourism, environmental and cultural development.

The issue of climate change has become the issue of priority for the leaders of the world to pay attention to this phenomenon. It is on top of the agenda of meetings of presidents and governmental and private organizations and non-profit organizations aimed at conserving environment. But the issue is the focus of global meetings for its importance and its direct effects on human. Many leaders of the countries of the world give direct attention to the issue of climate change. Many environmental conferences and seminars revolve around this subject.

Therefore, the direct attention to the issue of climate change is not coming randomly, but it stems from full faith in the importance of this issue and its future impact on human life and economies of countries, as is evident in the report of the United Nations released at the end of last year. It said that the number of natural disasters as a result of climate change between 2004 and 2006 has increased from 200 to 400 on an average annually. They include heatwaves, droughts, forest fires and storms. The number of floods increased from 60 to 100 floods during the period. The United Nations recorded some 70 dangerous floods in 2007, including floods in Sudan, Ethiopia, the Philippines, Indonesia, China, India, Bangladesh, Pakistan, Afghanistan and Colombia. Another study by European researchers has shown that global warming has caused storms and tropical cyclones in the Mediterranean, after having been concentrated in the northern Atlantic and the Pacific.

This issue has also become the focus of media and find information article to analyze an interperate what happening of natural and environmental crises. They urge the countries of the world and their leaders and environmental organisations to focus on this issue as it is badly effecting the poor when they are sleeping in their homes under their warm roofs. These poor people many time waking up when there is no roofs on their heads, no food and nothing to wear. They seek help from abroad to give them some appear from the tragedy and wife their tears and heal their pains. Therefore, there should be a common formula of the countries of the world to pay attention to the issue of climate change. Making this a slogan of international celebrations would not help. It needs united policy making efforts and legal frameworks to prevent fatal play of major companies which are producing millions of tons of greenhouse gases, leaving behind thousands of piles of solid, liquid and radioactive wastes which contribute to the destruction of the environment and nature of the earth and disruption of the ecological functions of life. We must also develop a philosophical awareness of the concept of climate change and its negative effects on the lives of millions of millionaires and owners of large transnational corporations, which will realise the need for reducing the burden of gases emanating from their factories. This would also require intensive media campaigns and their bold and candid discussions with media leaders. Perhaps this will help in rescuing the humanity from the effects of rapid climate change and its deadly surprises.

