

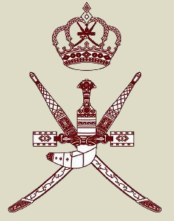


The National Field Research  
Centre for Environmental  
Conservation  
About innovative Environment Research

October 2016 -Moharm 1438



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



Sultanate of Oman  
Diwan of Royal Court

Issue 13

# A volunteer in my Environment



is a long term program for preparing  
trainers to spread the culture of the  
environmental volunteering in Oman





## point of view

## The Upcoming Environmental Danger

Dawood bin Suleiman Al-Balooshi  
dskbaloooshi@diwan.gov.om

If we are to express by saying and acting, then we are living today in an environmental and health imperceptible danger, which is "the danger of the plastic bags" in the Sultanate, this will be a major problem in the future if we don't find the medical, environmental and legislative proper solutions, with finding the quick and suitable alternatives for it. The international statistics declare that the world consumes 500 billion plastic bag per year, only 1 percent of them is recycled all over the world. However, here in the Sultanate, the statistics carried out by Omani environmental institution points out to a serious environmental crisis. Only Muscat consumes 6 million plastic bag, 200 thousand per day, these plastic bags often end as harmful wastes or get used as bags for rubbish before throwing them away. The plastic bags are plastic materials made thermally from chemical substances and fuel extractive substances, such substances do harm the human health and their surrounding badly, the scientific studies point out that the one plastic bag needs a period of 100 to 500 years to fully decayed, it has negative effects on the plants, soil, marine life and groundwater; in addition, it affects the humane health and react with the hot food causing many diseases like cancer, genetic deformities and respiratory illnesses. There are some solutions presented by many countries around the world to avoid the medical and environmental problems of the plastic bags, some countries banned using these substances and replaced it with ecofriendly bags, other countries imposed taxes upon the use of each and every plastic bag, therefore many countries stopped using them and headed to ecofriendly alternatives, some other countries decided to manufacture ecofriendly plastic bags according to specific standards, one of them is quick decay and not being a cause to the health of humans and environment; all these solutions contributed directly in evading the huge dangers caused by the plastic bags. There are efforts exerted by the Sultanate in this aspect through different concerned governmental parties; however, these efforts are still too slow and need to be triggered and applied on land. There is also no obvious interaction from the private sector in solving this dangerous environmental problem; therefore, this matter needs a strict stand from both the governmental and environmental sectors, as these plastic bags represent a dangerous threat on the health of human and environment in the Sultanate; in addition, its use is decreasing day after day without finding proper solutions or alternative. Generally, the upcoming danger that threatens the Omani environment in the danger of the plastic bags.

## Rotterdam Convention to combat the Chemical Substances

The Sultanate has joined this convention in accordance with the royal decree No. 99/81 issued in 25 / 10 / 1999. This convention was established to be the first defense line against any problems resulting from the chemical substances, this by preventing the unneeded import of danger chemical substances especially in the developing countries. The convention was able to control trafficking the danger chemical substances by publishing important information about the effect of these

substances on health and environment, which helps promoting its secure use; however, the convention included 30 articles. There must be prior consent issued for the importing country so that they can export chemical substances. All of this is for the joint responsibility between the exporting and the importing countries. The article number ( 14 ) in the convention explains information exchange between the member countries when necessary and suitable, also explaining the public information to people.



## Sherman Traps

Said Al-Rashedi

Since establishment, the National Field Research Center for Environmental Conservation (NFRCEC) has worked on providing a database for biodiversity in the Sultanate. At the beginning, the data required for conducting researches and studies were not available about some living organisms like small mammals. Therefore; the Centre worked on providing new data about the small mammals in the Sultanate by conducting surveys about the species of mammals existing in the protected areas. To do so, the specialists have used a special kind of traps known as Sherman traps.

## Usage

These traps come in different sizes. However, the team work has used the traps prepared for mammals that are smaller in size than rabbits by choosing a set of research points that have been randomly chosen to create samples that represent the total spaces of protected areas in full. These points include the various mountainous environments, valleys and plains ... etc to ease the comparison process and to study

the ideal environments that attract such mammals. The research teams work on spreading a set of Sherman traps on these points. They have spread 60 traps on equal distances between each others. These traps are kept for a period of one complete week. The work team checks the traps daily to ensure that it has received the requested results. The team checks also the elements of life at the boundary of the point that constitutes attractions for such organisms.

## Workplaces

The team has worked in protected areas like Ras al Shajar Nature Reserve, Al Saleel Park & Nature Reserve, Jebel Qahwan Nature Reserve, Jebel Samhan Nature Reserve; in addition to the Jebel Akhdar. The findings indicate that there are considerable groups of small mammals that ease the process of achieving the environmental balance. The findings usually address species like the spiny mouse, the dipodidae and the Egyptian spiny mouse. This supports the biological diversity in the region because birds of prey and foxes feed on such mammals.

General supervision

D. Saif bin Rashid Al Shaqsi

Editor

Dawood bin Sulaiman Al Balushi

Technical Review

Khalifa bin Badawi Al-Higgi

Editorial Board

Issa Alsamsami  
Marwa Mukhaini  
Hana Al Hinai  
Zakaria Al Mawal

Abdullah Alsabei  
Mohammed Almqaimi  
Mohammed Al Haddabi

# Mechanisms of controlling Global Warming

provide the necessary flexibility for the member countries to implement their commitments

Written by: Dr./ Mona Aal Thani

Global Warming is known as the warmth in the atmosphere resulting from the increase in the concentration of heat-trapping gases, especially carbon dioxide gas. We find that Kyoto protocol seeks reducing the developed countries' emissions of greenhouse gases through flexible mechanisms namely clean development as a method for controlling global warming and emissions trading. These mechanisms are featured with a number of facilities, as their target is to provide the necessary flexibility for the member states to implement their commitment so that responsiveness procedures of climate changes would not cost them economic burdens during implementing their commitment.

Clean Development seeks achieving many targets, for example:

1. Reducing emissions and reaching a balance in the chemical structure of the atmosphere as a main target of WCO Kyoto Convention.

2. Creating a state of balance between the developed countries (which are responsible for the climate change phenomenon as a result of their increasing emissions) and the developing countries (which are considered most severely affected by the phenomenon) through establishing clean development projects in developing countries by developed ones.

3. Member states should reduce their emissions to reach an excess of the obliged amount by the protocol, through which an excessive amounts of emissions reduction would be provided that they can trade in to achieve economic benefits.

### Clean Development Projects

Creating clean development projects would get a sort of positive responsiveness in the environmental field of these countries, that through:

-Assisting developing countries

The mechanism of emissions trading is one of the most effective mechanisms to reduce environmental pollution

Clean Development projects get positive responsiveness in the environmental field of both developed and developing countries



## Emissions Trade

As for the mechanism of emissions trade which is one of the modern economic theories by which this trade is considered one of the most effective methods to reduce environmental pollution. United States Environmental Protection Agency has started setting action programs and copyrights for emissions trading since 1970 so as to set an ideal economic cover for achieving environmental targets. From the offered options for countries in accordance with the idea of emissions trading are:

-Either they reduce their emissions to the equivalent of the percentage defined by the protocol, through which they implement their commitment by individual and national effort.

-Or the country would reduce its emissions but it's unable to reach the percentage of reduction defined by the protocol; thus, the country starts searching for other methods to help it implement its commitment.

to develop through creating clean development projects or also known as environmentally

-peaceful projects whose produced emissions are subjected to the observation of the executive council in charge of administrating clean development projects according to article number 12 in Kyoto Protocol.

-Assisting developed countries in implementing their commitment of reducing their emissions in accordance with Kyoto Protocol through executing projects which are of a lower cost in comparison with executed projects in developed countries; thus, developed countries would get documents by reducing released emissions from these projects in developing countries.

### Buying Instruments

Despite the fact that Environmental organizations object to emissions trading mechanism for they consider it a license to polluting the environment, as it's allowed for the polluting countries to buy carbon cuts instruments in accordance to it from other countries, however this mechanism includes many advantages, most significant are:

-Encouraging member states to reduce their emissions within their territory by taking internal measures and procedures that make its implementation of a lower cost than other mechanisms, such as clean development mechanism.

-This mechanism helps countries which are not able to implement their commitments to benefit from reduction in excess of their need than what other countries need. So, buying countries would implement their commitment in accordance with the protocol on the one hand by buying carbon cuts instruments from other countries able to reduce their emissions by amounts more than these obliged by the protocol, this mechanism also helps the selling states to benefit from the revenues of this trade in supporting sustainable development.

# A volunteer in my Environment



The program was done by The National Field Research Centre for Environmental Conservation in the Diwan of Royal Court, in Al Wahat club in Al Udhaybah, in cooperation with A'Sharqiyah University in the period from 4 to 7 September 2016, it worth mentioning that it got positive interactions in its first stage, as it included many lecture and discussions that were all about training the trainers on 10 important environmental issues, related to the Sultanate's efforts in preserving the environment, the main issues were:

## is a long term program for preparing trainers to spread the culture of the environmental volunteering in oman



The biological diversity in the Sultanate and its main challenges, Climate change and its effects, strengthening the positive ecofriendly behaviors, poaching wild animals and fungal life, the environmental tourism and its developmental challenges, the importance of recycling the waste producing ecofriendly materials, using the modern technology in the field of environment, the field safety in the environmental work, first aid training in the environmental work, in addition to specializing the last day if the program to train the participants on field on the scientific and right methods of the environmental field search in As Sulayyel reserve in South A'Sharqiyah province.

### The target of the program

Dr.Seif bin Rashed Al Shakasi, the executive director of The National Field Research Centre for Environmental Conservation assured in the opening ceremony that this internship program is to find a generation of aware Omani youth who will contribute maintaining their environment and homeland, also strengthening the concepts of environmental education in the Sultanate, and achieving the high approach drawn by his majesty the glorified Sultan Qaboos bin Saeed –May God save him-which simply declares the importance of the participation of all the segments of society in preserving the environmental system in the Sultanate and conserving its natural resources in a way that guarantees achieving the sustainable development.

The target of the program is preparing a generation of Omani youth who are ready to volunteer working in the field of environment, increasing the social awareness of the matters and environmental issues in the Sultanate, and the methods of finding the proper solutions. Strengthening the environmental positive

### Dr. Saeed Al Rabeaa:



All what we need is to move from the school environment and the theoretical precepts to the field to apply some school curricula that focus on the environmental work and its importance

### Dr. Seif Al Shakasi:



The program aims at finding a generation of aware Omani youth who will contribute maintaining their environment and homeland

behavior of individuals, the thing which helps serving the environmental system in the Sultanate, and works on achieving the sustainable development in all the fields of life. In addition to strengthening the aspects of environmental education in the Sultanate, activating the environmental research work in the Sultanate and enhancing its values and principles in the Omani society. Furthermore, strengthening the cooperative work between the governmental parties, academic and research institutions and civil sector institutions in the Sultanate.

### Development

Dr. Ali Al Balushi, head of Geography Department in Sultan Qaboos University, and one of the lecturers in the internship program, assured that such internship programs has a great benefit in developing the environmental system inside the environmental work, as it elevates with a new generation of trainers in the field of environmental volunteering, the thing which contributes the spread of the idea, as it can make the difference by spreading the awareness in the society, the thing that will make everyone will participate preserving the Omani environment, this will reflect of the sustainability of the development in the country. He also had a perspective on how can the students have

the utmost benefit of the program, this is done through three stages, first stage is understanding the lectures of the internship program, and getting to know many people especially from this group of researchers, scientists, and specialists in the environmental affair, in the second stage the students should develop these information and practice it, in addition to developing their skills in the training field, moreover, in the last stage the students are transferring these information to their local society to generalize the benefit and spread the environmental awareness as we said before. He ended his speech by saying that these programs or initiatives is all about creating a popular base that will participate preserving



- The program witnessed a wide participation of researchers, specialists and academics from various quarters
- Endeavors to increase the social awareness with the environmental matters and issues, and strengthening the positive behavior of individuals
- Efforts to strengthen the environmental education aspects in the Sultanate and activating the Environmental Field Research Work



**Dr. Ali Al Balushi:**



The program prepares a new generation of trainers in the field of environmental volunteering, in order to transfer the volunteering initiatives from the research specialized summit to the widest spread in the community

**Dr. Muhammad Al Kalbani:**



We seek the students' participation in spreading the environmental awareness by urging their local societies to preserve the environmental system

the environment and contribute enhancing the awareness, as preserving the environment is our responsibility, so all of us should help preserving.

**Supporting the Community Participation**

Dr. Muhammad bin Seif Al Kalbani director of the department of sustainable development in the ministry of environment and climate affairs said that the program is all about spreading the social environmental culture, the first stage was done at A'Sharqiyah University, what if every province got only one student supporting the voluntary initiative? We can spread a big deal of awareness which is our goal. He continued: Students are responsible to spread the environmental awareness by urging their local communities on preserving the environmental system of the Sultanate; although it is hard comparing to their age, but we saw the determination of the students that proves their capability of achieving a big deal of social awareness, this is due to their understanding of the importance of preserving the Omani environment and its biological diversity, with ideas that suits their generation.

**Students Talk**

Saleha Saeed Al Alawi, self-



**Mazen Al Dawi**



**Adhari Daoudi**

development trainer concerned with the environmental affair in A'Sharqiyah University: The program works on raising the level of environmental awareness and help the trainees and those who join the program so that they be aware of the problems surroundings. The positive society will not only accept accepting the awareness, but also will participate in it with all its abilities, the means of awareness are many, through the media and channels and such. Mazen Al Dawi, student at A'Sharqiyah University said that "A volunteer in my

environment" program is very useful, as it aims at preparing environmental trainers to spread the awareness in their houses first, then to the society, also to find solutions for the environmental problems and how to deal with them, in addition to the target of raising the level of awareness in society and forming capable voluntary teams. From her side, Eman Al Balushi, student at A'Sharqiyah University said that the Importance of participation is a training to gain knowledge, competences, and experience in preparing the trainee to work and make him able to keep up with the practical life, in addition to preparing individuals who are able to respond to all the developments in the working environment, not to mention developing youths talents, and implanting right values, through lectures and field courses.

Her colleague Amina Bahit Al Makheni, student at A'Sharqiyah University shared her perspective by saying that the program is all about creating the proper environment to earn knowledge, improve the levels of knowledge, creating interactive environment, and the awareness starts with himself then this change will be transferred to the society.





## Under-Water Cleaning-Up Campaign to Protect Al-Dimaniyat Islands

The Environment Society of Oman launched an initiative campaign to clean-up the underwater of the natural reserve Al-Dimaniyat Islands. This came among the Society's campaign which aims to remove the waste materials accumulated there and reserve the marine environment in the Sultanate. About 15 volunteers participated in this campaign and helped the Society to get rid of around 400 kilograms of abandoned fishing tools, wharfs and other harmful wastes. That region is one of the most

sensitive marine environments and one of the best for diving. That campaign has been sponsored by Petroleum Development Oman (PDO). And it gets basic support from a number of governmental parties like: the Ministry of Environment and Climate Affairs. Moreover, some private companies support the campaign like: Oman Sail, Shell Oman Marketing Company, the Arab Creativity Company Atrax. Before the clean-up began, the Society gave the volunteers a brief about the diving sites and the surrounding environmental life.

### Scientists: Is there a connection between Alzheimer's and air pollution?

A British Mexican research project has found a possible connection between air pollution and getting afflicted by Alzheimer's disease, this is after performing detailed studies of the brain tissue. Barbara Maher, a participant in the study, and a professor in Lancaster University, her colleagues and she studied the brain tissue by taking samples from 37 different people living in Mexico City and Manchester, it worth mentioning that these cities are abutments of air pollution. Using microscopic and spectroscopy analyses, the team found little magnetic molecules resulted from air pollution, these molecules landed on the brains of those who participated in the study.

### IRENA: 70 GigaWatts of Solar Energy in Africa by 2030

The International Renewable Energy Agency (IRENA) has issued a report yesterday with the title of "The Photovoltaic Solar energy in Africa: Costs and Markets", in this report it assured that the investments in this sector is witnessing an unprecedented momentum, this is due to the fast decrease in the technical costs. Also the composite cost of the photovoltaic solar energy projects decreased on the level of service facilities by 61% since 2012, as it now costs 1.3 dollars per watt, in compare to the international rate which is 1.8. The international production capacity doubled six times since 2009, which as an orientation that started to appear in Africa, the continent was supplied by 800 MegaWatts in 2014, followed by another 750 Megawatts in 2015.

### IUCN Calls World's governments for banning the ivory trade

The representatives of countries, who met at the conference of the International Union for Conservation of Nature and Natural Resources (IUCN) in Hawaii, issued a draft calls for banning all the ivory markets in the world and banning the domestic trade in ivory, in order to preserve what remains of elephants and rhinos on earth.

Following a heated arguments, and despite the opposition that came from a number of countries, this decision was issued on the final day of the conference. This conference brought together over ten days about 8000 person in Honolulu, the capital of Hawaii, the conference included experts, scholars, activists, and political officials.

## The Mistry Environment reviewing shoreline erosion in north and south Batinah

The Ministry of Environment and Climate Affairs made a visual presentation on the phenomenon of shoreline erosion in both provinces: North and South Batinah. The presentation was displayed in the main building of the Ministry facility, as the visual display presented Omani coasts and the environmental problems faced, mainly shoreline erosion and backfill of the coastline, as well as throwing waste and the pressure from the development and tourism projects, in addition to road projects near the coast and the agricultural practices that are not healthy. The Ministry, through its presentation, warned that the continual of such influences on the coastline area would affect the shores to be unserviceable for entertainment and swimming, in addition to losing its value as natural habitat for living turtles and birds. This also would threaten the life of living organisms as well as aggravating the damages on the Omani environment near coastline. Shoreline erosion is known as the actual removal of beaches sand into deep sea water all because of the rising of sea levels as a result of climate changes in addition to some human practices as urbanization on shores that leads to preventing the supply of sand from land, this is in addition to development and services projects construction near the intertidal zone which, consequently, leads to

weakening the soil cohesion on the shore that results in facilitating its erosion. Moreover, the construction of breakers and ports results in a change of the movement and direction of waves and currents which, consequently, leads to the change of the shore form and nature. Backfilling or burial in the marine environment, including shores or gullies, are considered wrong practices that affect the marine environment negatively. In Al Batinah shores, many backfilling processes were noticed, owing to different reasons, some of which targeting the reclamation of landing spots of fishermen on shores, or random backfilling processes in order to protect the houses located on the seashore in addition to the backfilling of some gullies as to construct and restore roads for cars. The results of random unplanned backfilling processes may lead to the leakage of some dangerous toxic substances into marine life or change the level and the flow of shore that results in the erosion or accumulation of dust on shore, in addition to that backfilling gullies and flowing water out of valleys is in itself a destruction of important biodiversity and biological diversity sites. Coastal regions are considered one of the critical environments that require care and continuous attention for being the habitat for many organisms as well as being a natural outlet for citizens and tourists. This is why the region must be on a high level of sanitation and charm as it reflects the identity and the fixed principles of the State in protecting the environment to make it appear as it should be in a beautifully appropriate manner.

