



SULTANATE OF OMAN  
MINISTRY OF EDUCATION



2010 International Year of Biodiversity



National Report on the  
International Year of Biodiversity  
Sultanate of Oman



## HIS MAJESTY SULTAN QABOOS BIN SAID



«... *A*s human beings co-existing on this planet we have gravely neglected the vital necessity of conserving the environment and natural resources due to the lack of collective coordination. Indeed, we have taken a potentially fatal opposing course of luxury and industrial progress, regardless of the resulting imbalance between development and the environment, and without taking into account the dire consequences of the effects upon the atmosphere and the ozone layer, river and sea water, the extermination of certain species, the destruction of forests, and the contamination of once fertile soil. Should this continue, humanity will court collective suicide.

The conservation of the environment is the responsibility of all of us, a responsibility that knows no political boundaries. Therefore, man, wherever he lives, must contribute to this conservation and must order his life accordingly. This must be done in a planned, rational way and taking into consideration the numerous causes of pollution, whether natural, biological, industrial, chemical or physical.

We must set a limit to haphazard methods and protect what is left of our grazing lands and water resources against desertification and drought.

We also call upon the industrialized nations to temper that heedless technological rivalry, which directly contributes to this dangerous situation, and to strive to narrow the wide disparity which exists between their own and the developing countries, in order to redress the balance between development and the maintenance of a clean environment ...»

[His Majesty Sultan Qaboos bin Said - Sultan of Oman - on the occasion of the UN Conference on Environment and Development, June 1992](#)



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## Message from His Excellency the Minister of Education



» *T*he UN resolution No: 61/2003, declaring 2010 as the International Year for Biodiversity (IYB) was regarded as the warning bell. The UN and other authorities and organizations concerned with the environment wanted to highlight the findings of various studies and research regarding the deterioration taking place in the biodiversity and the accelerated rates of extinction of many species. As a result, on 19 December 2008 the UN General Assembly urged all the member countries to fulfill their undertakings to greatly reduce the loss of biodiversity by 2010.

Now that the IYB is over, did we fulfill our obligations? Did we actually reduce the rate of deterioration of the biodiversity? In order to establish this we need to stop and seriously review our policies and practices, at governmental, organizational and personal level. Having mobilized our efforts and sharpened our tools, the importance of the issue means that we cannot tolerate indifference at the end of the year. After all, biodiversity as an inheritance essential for the sustainability of our lives and the lives of future generations so it is essential that we move on with the plans we made last year.

The Sultanate of Oman is a developing country which began its modern renaissance as recently as 1970. Now, however, it stands well ahead of many countries around the world in term of economic and human development. Developments in education and environment protection in Oman have been particularly noteworthy.

Since the dawn of the renaissance era in Oman, environmental issues were always given great precedence and were simultaneously incorporated in development plans. Institutions for the protection of the environment were established and legislation enacted to ensure compliance with the rules and standards required when implementing the development plans and economic projects. As a result, throughout its mountains and valleys and its plains and seas, Oman has been able to retain its rich environment and biodiversity.

When UNESCO urged its member countries to create national teams to follow up on the implementation of the IYB objectives, the continuous interest and atten-

tion afforded to environmental protection in Oman meant that the Oman National Commission found little difficulty in mobilizing partners to achieve the year's objectives. We can confidently say that concern for the environment in general, and for biodiversity in particular, will continue in Oman with the same strength in the years following the International Year for Biodiversity.

Since the beginning of the renaissance era, Oman has been aware that environmental protection is a global issue and that all of us should collectively face up to this challenge. The Unesco Sultan Qaboos Environment Protection Prize, established in 1989 under the supervision of UNESCO, is a prominent feature of Oman's efforts to reward the global initiatives for the protection and preservation of the environment. Oman also signed up to international treaties and agreements to protect the environment and biodiversity, including the 1992 International Agreement for Biodiversity, and the 2007 International Trade Agreement concerning endangered wild animals and plants. Keeping in line with environmental preservation policies the ministry of Education has integrated concepts of environmental preservation and biodiversity in its national curricula at all stages due to the important role of these concepts in preparing future generations for sustainable development.

In conclusion, I would like to extend my gratitude and appreciation to the National Working Team for the celebration of IYB. I would also like to convey my gratitude to the Ministry of Environment and Climate Affairs for its rich programs during the year, and for its continuous efforts to maintain and preserve the environment and biodiversity.

May God Almighty grant us success in serving our country and the world at large.«

**Yahya Bin Saud Al Sulaimi**  
Minister of Education  
Chairman of the National Commission for  
Education, Culture and Science

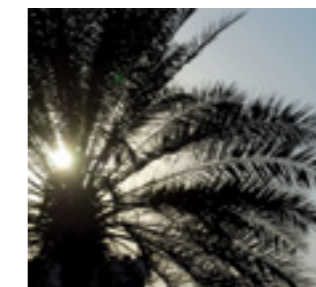
## International Year of Biodiversity (IYB)

Biodiversity is the diversity of life, and includes all living organs, human, plant and animal and micro-organisms and their genetic inheritance and eco systems. Biodiversity is a vital and basic treasure for each nation, and it is the foundation of man's existence.

In its resolution No: 203/61, the General Assembly declared the year 2010 as the International year of Biodiversity, and assigned the secretary of the biodiversity agreement to coordinate the events for the year. The secretary called for the cooperation of all the UN authorities, multilateral environmental agreements, international organizations and other associated parties, in order to mobilize international attention to the issue of the continued deterioration of biodiversity, to focus on its importance to our lives, to emphasize our achievements in maintaining our biodiversity and to encourage doubling our efforts to reduce the loss of biodiversity. The international year of biodiversity aimed at reflecting the objectives of the organizations around the world to ensure the protection of biodiversity. The declared objectives are:

- Raise public awareness of the importance of conserving biodiversity and the basic threats to biodiversity
- Celebrate the achievements of partners and other stakeholders in protecting biodiversity
- Encourage individuals, organizations and governments to take direct biodiversity conservation activities
- Providing pilot solutions to mitigate the threats to biodiversity
- Prepare the ground for communicating post-2010

Saving the biodiversity requires the efforts of all of us through a variety of activities around the world, and it is anticipated that the international community will cooperate with us to ensure a sustainable future for all.





## National team to celebrate IYB

The Oman National Commission for Education, Culture & Science is aware of the importance of participating with the rest of the world in celebrating IYB and, in cooperation with the various concerned authorities in Oman, it helped to initiate the 2010 celebrations. A team was formed to follow up and implement the various activities and events associated with the IYB celebrations. Ministerial decision No: 135/2010 was issued to mobilize all the efforts required to achieve the anticipated objectives. Along with the National Commission, representatives from the following institutions were included on the team: Ministry of Education, Ministry of Environment and Climate Affairs, Ministry of Agriculture, Ministry of Fisheries, Ministry of Tourism, Sultan Qaboos University, Omani Botanical Garden, Oman Environment Association and the Omani Association for Fine Arts. In addition, many other government, public and private sectors and NGOs took active part in the events and activities throughout the year. 🌿

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SULTANATE OF OMAN  
MINISTRY OF EDUCATION

Ministry of Education
- 

Ministry of Environment  
and Climate Affairs
- 

سلطنة عمان  
وزارة الزراعة

Ministry of Agriculture
- 

وزارة الثروة السمكية

Ministry of Fisheries Wealth
- 

وزارة السياحة

Ministry of Tourism
- 

Sultan Qaboos University
- 

Omani Botanical Garden
- 

Oman Environment Association
- 

Photography Club  
The Omani Association  
for Fine Arts

## Biodiversity in Oman

The land of Oman includes desert and rocky plains, sandy areas and coastal lines. Despite its dry atmosphere, Oman is located in a highly bio-diversified region, especially where there are high concentrations of rain deposits.

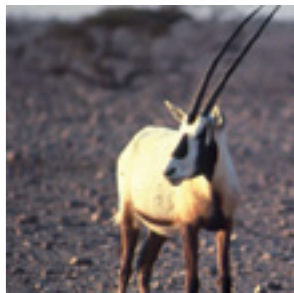
Terrestrial biodiversity is also a significant component of Oman's biodiversity, with more than 1,204 various species of plants have been identified. The plant groups include 78 habitations, 11 of which are currently classified as in threat of extinction to various degrees. The wild life in Oman includes the Arabian Gazelle, Arabian Tiger, wolves, striped hyenas, Sand Gazelle, Arabian Oryx, Nubian Ibex, Arabian Taher and Arabian Leopard. Most of these mammals are included in the at-risk to extinction list. More than 1,140 species of fish, 329 species of birds, 75 species of reptiles and thousands of invertebrates have also been identified. The Omani coastal lines are the host for five species of marine turtles.

It is believed that several terrestrial species are extinct or are about to become extinct due to threats to their habitats. The most prominent reasons for the loss of biodiversity in Oman are overgrazing, destruction of natural areas, the introduction of alien species of animals, plants and herbs into the Omani environment and desertification.

Aware of the current condition of the biodiversity, Oman is aware of the significance of maintaining a healthy environment to protect nature and develop economic, agricultural and industrial production to achieve sustainable development. Accordingly, His Majesty Sultan Qaboos bin Said - Sultan of Oman - issued several royal decrees aiming at preserving the environment, pollution control, protection of natural reserves and wildlife to ensure sustainability of these significant resources and sectors.

In 1992 Oman joined the biodiversity agreement which was ratified in 1994 by the royal decree No: 119/94.

In 2001 the Omani government approved the national strategy for biodiversity and an accompanied action plan. The action plan consists of 11 topics: protection of natural resources, protection of wildlife in fresh water, marine life, fisheries, natural and aqua plants, agricultural resources, energy resources, mineral resources, technology based industry, urban environment, water resources, environmental emergency, public, NGOs and private sector participation, social values, quality of life and religious values. 🌿



The Sultanate of Oman





## Celebrating national, regional and international environmental occasions

### Oman Environment Day January 8

Oman celebrates the Omani Environment Day on January 8th of every year. The first celebration was in January 1997 based on the royal directives to protect the Omani environment and preserve its natural resources which represents the strategy for sustainable development covering all aspects of modern life in Oman.

The celebrations included several major events such as the Gulf Eco Exhibition 2010 in cooperation with the Oman International Exhibition & Trade Company, and the "Environment and climate change, sustainability of water and marine resources and renewable and alternative energy" seminar. Coinciding with this event the Ministry of Environment and Climate Affairs organized a number of programs and activities aiming to protect and preserve the wildlife such as the campaign to clean the beaches of Diminiat Islands reserve, the campaign to plant mangroves in the Khowr of Al Wadiyat, Wilayat of Shinas in Al Batina Region.



### World Environment Day June 5

Sultan Qaboos University (SQU), in collaboration with the Ministry of Environment and Climate Affairs, organized a Biodiversity Workshop at the university. The event was to coincide with the celebrations for the World Environment Day which takes place on June 5th of every year. The slogan for this year "Many Species ... One Planet ... One Future" was of particular importance considering its call to enhance biodiversity, support the wildlife ecosystems and participate in the stability of Planet Earth for a bright future for our children and grandchildren. The slogan was particularly relevant due to the world celebrating the International Year for Biodiversity ("IYB") in 2010. The workshop was accompanied by a small biodiversity exhibition with participation from various government and private sector institutions.





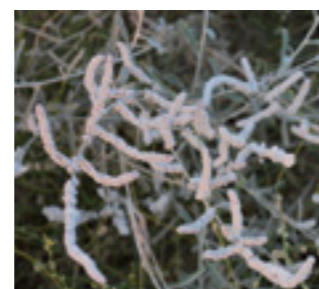
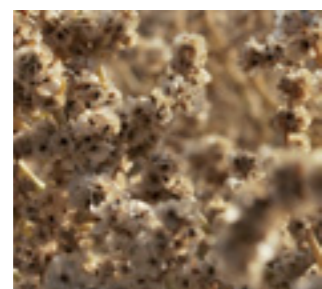
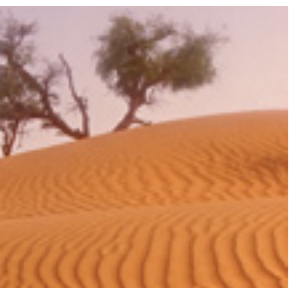
## World Biodiversity Day May 22

Based on Oman's celebrations for IYB throughout 2010, the Oman National Commission organized an exhibition on biodiversity with the logo "Biodiversity for Sustainable Development" with the participation of various parties concerned. On the same day, the Green Wave Campaign was launched.



## World Day for Desertification Control June 17

Within the World Day for Desertification Control 2010, and under the slogan "Enhancing the Earth in any place enhances wildlife at any time", the celebrations were inaugurated this year by the Ministry of Environment and Climate Affairs in the district of Qeiron Hirti, in the Governorate of Dhofar. This revolved round the opening of the mist collection and purification project, in cooperation with Mitsubishi General Trading Company (Japan). The project is for five years and is considered one of the most significant projects for desertification control in Dhofar, and comes within the ministry's efforts to mitigate the impact of desertification in Oman, using modern technology to collect water from the fog during the monsoon season, to be used to irrigate trees within the natural reserve. 🌿



## Regional and international conferences, seminars and workshops

### Workshop for media and environmental awareness in disasters and environmental crises in the AGCC

The National Commission cooperated with the Ministry of Environment and Climate Affairs in organizing this workshop in February. More than 120 experts, representing 42 public and private institutions, participated in the workshop. Important participants included parties concerned with crisis management and various media representatives from Oman and other GCC countries. The workshop was organized in collaboration with the Environment Awareness and Information Committee, AGCC Secretariat General, and the Oman National Commission for Education, Culture & Science.

The workshop concluded with the participants agreeing on the importance of establishing a media plan for environmental emergencies and crises in the AGCC countries, and stressed the importance of including within the curricula appropriate behavior in times of natural crisis and emergencies such as earthquakes, volcanoes and hurricanes and recommended having a continuous training program for the environmental media to update their information on environmental disaster management plans, share the benefits of international experience and the importance of E-media and the regulations required to limit unreliable rumors on crises. The workshop also recommended the preparation of an environmental crisis awareness and behavior program, in cooperation with concerned parties in the GCC, to prepare the media on how to report information during a crisis and to raise community awareness on how to mitigate the impact of a crisis.

## Regional seminar on Ecotourism and protection of coastal environment October 24 - 26, 2010

This seminar was organized in cooperation between the Oman National Commission and the Islamic Educational, Scientific and Cultural Organization (ISESCO).



The aim of the seminar was to encourage relations between marine scientists, researchers and marine resources experts, publish information on the technology and marine potentials in the member countries, in addition to supporting joint scientific marine research programs, providing solutions to the problems facing the member countries and recommending appropriate solutions for particular problems. The seminar also aimed to enhance the exchange of information and expertise on marine resources and technologies, and work on providing reference on marine resources by publishing related documents and studies, together with environment preservation by educating tourists, residents and local communities on the appropriate use of wildlife areas, and to encourage ethical behavior in preserving the coastal environment. Experts from the UAE, Bahrain, Syria, Egypt, along with a large number of Omani experts from various authorities, participated in the workshop.

## Youth Communication and Network Conference (YouthCaN 2010) April 24 - 26, 2010



Under the supervision of the Ministry of Education, the Oman Eco Group participated in the international conference of YouthCaN, part of IEARN International Organization, which cares for environmental and development projects involving students around the world. The Oman Eco Group is the first group from Oman to join the YouthCaN, and has organized several international activities with various countries, including the Green Bridge project with the USA and Pakistan.



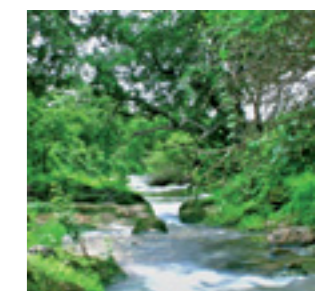
The group participated in the conference in response to an invitation from IEARN, and the Omani delegate presented an introduction to Oman and the Oman Eco Group. The group had a special stand at the conference which was well received by the visitors and students. The delegation also participated in various workshops including the plastic recycling and paper manufacturing workshops. 🌱



## National seminars, workshops and training sessions

### Environment, climate change, sustainability of water and marine resources and renewable and alternative energy seminar - January 12, 2010

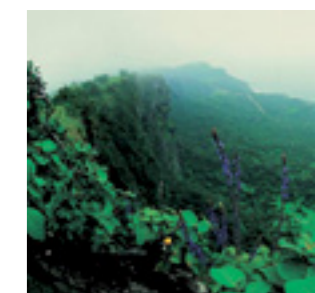
Within the celebrations for Oman Environment Day, the Ministry of Environment and Climate Affairs organized the "Environment, climate change, sustainability of water and marine resources and renewable and alternative energy" seminar, during which several working papers on environmental topics related to climate change and finding suitable solutions were discussed. The seminar focused on various aspects of sustainable development in relation to environment protection, nature preservation, water and sewage management, integrated waste and chemicals management, pollution control and the use of renewable energy within the AGCC.



### Workshop on the role of fog in supporting the ecosystem January 31, 2010

The Ministry of Environment and Climate Affairs organized a workshop on the role of fog water in supporting and continuity of the ecosystem in the Dhofar Mountains. The workshop witnessed participation from various public and private sector institutions, including the Ministry of Agriculture, Ministry of Regional Municipalities and Water Resources, Ministry of Transport and Communications, The Diwan of the Royal Court, represented by the Environment Preservation Office, Sultan Qaboos University, Mitsubishi and the Environment Research Center, Germany also participated.

The workshop discussed and presented various experiments by public and private institutions to benefit from the fog water, in addition to present-



ing and analyzing data from the weather stations in Dhofar, operated by the Ministry of Environment and Climate Affairs, and how to benefit from such results to implement the projects relating to the sustainability of plant cover and desertification control.

## Biodiversity workshop June 6, 2010

The Ministry of Environment and Climate Affairs, in cooperation with Sultan Qaboos University, organized the Biodiversity Workshop, as part of the celebrations for World Environment Day. The workshop was attended by the Under Secretary of the Ministry of Environment and Climate Affairs and a number of experts, faculty members, SQU students and international experts from Australia and India. The workshop discussed several working papers dealing with a number of vital topics related to the environment, such as climate, pollution, marine life and water resources management.

## Open Water Scuba Diving course July 12 - 17, 2010



The Omani seas are rich in a unique biodiversity, with its various species of fish, turtles, dolphins, corals and countless other marine creatures. In order to encourage our youth to explore the biodiversity of Omani waters a group of young Omanis participated in this course to obtain an open water diving license after successful completion of training in deep diving in 12 - 18 meters of water. The course was initiated by the Oman Diving Center in cooperation with the Oman National Commission and Oman Swimming Union.



## Oman Biodiversity seminar August 2, 2010

The Oman National Commission initiated an Oman Biodiversity Seminar to coincide with the monsoon season. It decided to host it in Salalah, Dhofar, which is considered one of the richest environmental areas in Oman, and one which is unique in the region. The seminar contained two sessions discussing six presentations:

- The efforts and programs on preserving biodiversity and preservation in Oman
- Marine biodiversity in Oman
- Biodiversity in natural rangelands in Oman
- Biodiversity in the Omani curricula
- Genetic resources for food and agriculture in Oman
- Biodiversity as one of the main pillars for tourism development in Oman

Several institutions participated in this seminar including the Ministry of Environment and Climate Affairs, Ministry of Agriculture, Ministry of Tourism, Ministry of Fisheries and a large number of experts. 🌿



## Exhibitions

### Oman Environment Exhibition (Gulf Eco 2010) January 11 - 13, 2010

The Gulf Eco 2010 was one of the most significant events organized by the Ministry of Environment and Climate Affairs, and it coincided with the celebrations for Oman Environment Day. It was organized in cooperation with the Oman Exhibition and Trading Company and several public and private sector institutions representing local, regional and international organizations, and a number of universities, colleges and Omani Women Associations participated in the exhibition. The exhibition presented various modern technologies using environmental raw materials, and important work and activities related to environment health and protection. The exhibition also included an open day for students with many fun activities focusing on education.



### 1st Biodiversity Exhibition - Biodiversity for Development May 22 - 23, 2010

On the occasion of the World Biodiversity Day - celebrated by UNESCO every year on May 22nd - the Oman National Commission organized an exhibition under the slogan "Biodiversity for Development". The exhibition aimed at highlighting the efforts of concerned parties to preserve the biodiversity and inform the public of efforts being taken.

The exhibition included several publications and films dealing with biodiversity in Oman and around the world, in addition to models of various environments representing biodiversity in Oman and many photos, posters and leaflets. The exhibition also highlighted the efforts of the schools participating in the Green Wave campaign, and the role of the campaign. The Oman



Student Environment Group, the knowledge development program and IEARN participated at the exhibition, along with a number of the parties concerned with biodiversity including the Ministry of Education, Ministry of Environment and Climate Affairs, Ministry of Tourism, Ministry of Agriculture, Ministry of Fisheries, Sultan Qaboos University, Oman Botanic Garden, Oman Environment Society and the Omani Association for Fine Arts.

## World Environment Day Exhibition June 5, 2010



On the occasion of the World Environment Day on June 5th, 2010, the Environment Support Group, in cooperation with the Ministry of Environment and Climate Affairs, organized this exhibition in the Wilayat of Adam, in Dakhliya Region. The exhibition contained two sections, one on publications by the Ministry of Environment and Climate Affairs exhibiting educational materials targeting both children and adults. The second section presented the work of the Environment Support Group and the latest activities of the group.

The exhibition aimed at encouraging the participation of civil society in preserving the environment and to raise awareness of the importance of the environment and preservation of biodiversity. Al Dakhliya Region, with its mountainous, deserts and agricultural land, is one of the richest regions in Oman with regard to biodiversity.

## 2nd Biodiversity Exhibition August 2, 2010

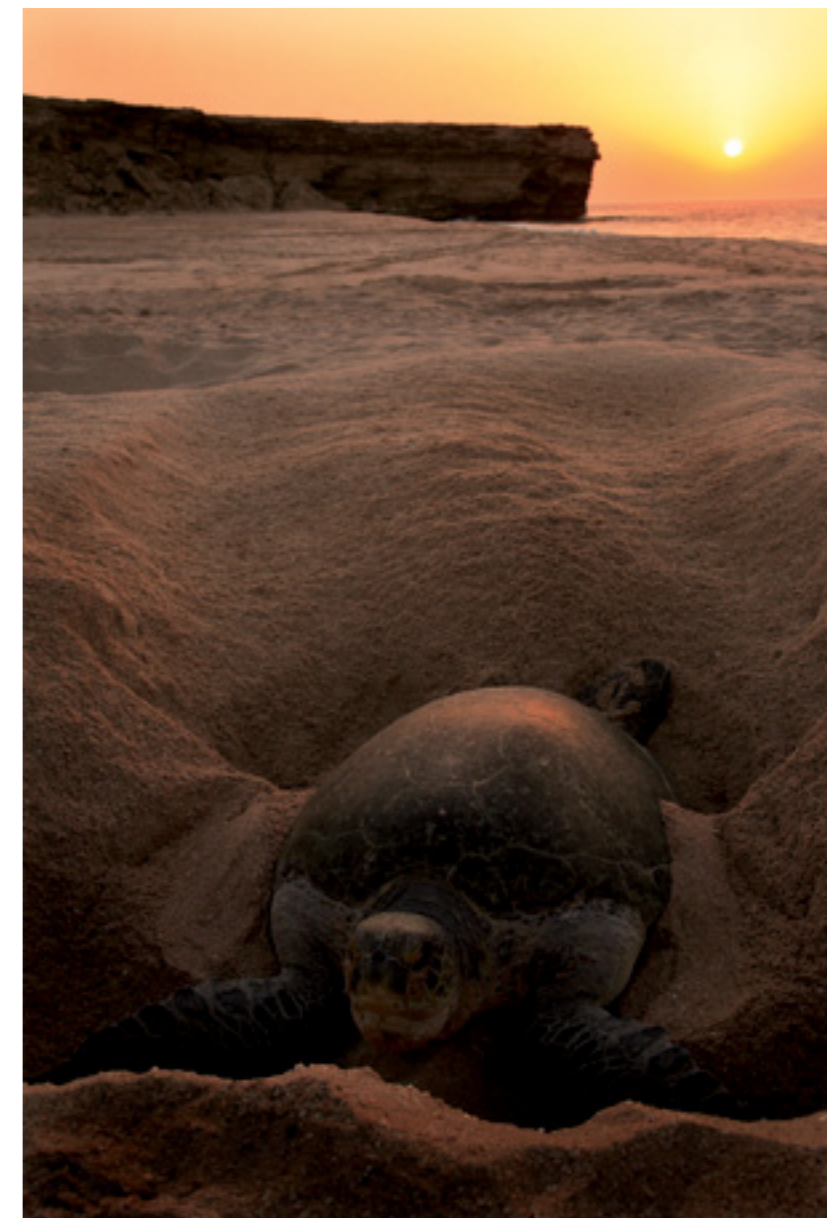


The Oman National Commission organized the 2nd biodiversity exhibition on August 2nd, 2010 in Salalah, Governorate of Dhofar, coinciding with the Oman Biodiversity seminar. The exhibition aimed at highlighting biological resources in Oman, and introducing the public to the efforts of various authorities in Oman to preserve Oman's biodiversity and on ways on how to invest in it. The exhibition presented saplings and samples of trees and plants in Dhofar, in addition to the publications highlighting Oman's interest in biodiversity. Participants in the exhibition included the Oman National Commission, Ministry of Environment and Climate Affairs, Ministry of Fisheries and Ministry of Agriculture and Ministry of Tourism.

## Photography exhibition "Biodiversity in Oman"

The Ministry of Environment and Climate Affairs, in cooperation with the Omani Association for Fine Arts, organized a photography competition to provide an opportunity for amateur photographers in Oman to express their interest in the environment. The competition lasted around five months and the Oman Biodiversity Exhibition exhibited the competitors' work. It was inaugurated by the Under Secretary of the Ministry of Information in the premise of the Omani Association for Fine Arts in Muscat. This was the first competition of its kind in the region and proved hugely popular with 128 participating photographs. 🌿

The winning photograph



## Field activities



### Mangroves planting campaigns

Oman has a type of mangrove tree known as *Avicennia Marina* and is found in various coastal areas between Al Batina in the north, passing by Muscat, Sharqiya, Wusta and Dhofar to the west. The total area covered by mangrove trees is around 1000 hectares. Experts with the Ministry of Environment and Climate Affairs cooperate with the government authorities and private sector and local communities to implement mangrove planting campaigns within a planned program covering several coastal locations. The campaigns include several lectures on importance of the mangroves to the ecosystem. Participants plant saplings with their names inscribed in order to encourage them to retain an interest in the plantations. Several campaigns have been completed including mangrove planting in Khowr Al Wadiyat in the Wilayat of Shinas, Al Batina Region, where the sixth phase was recently completed with more than 3,000 saplings planted, and 9,000 saplings in Khowr Shinas during the first phase in 2010.



### Beach and coral cleaning campaigns

The Ministry of Environment and Climate Affairs continues its efforts to preserve the beaches and coral reefs as an integrated ecosystem of great economic, social and tourism significance. In cooperation with government authorities, the private sector and local communities, the ministry organized campaigns to clean beaches and coral reefs throughout the coastal areas of Oman. The campaigns aimed at spreading awareness on the importance of preserving beaches and coral reefs and encouraging community voluntary work. Large numbers of divers of various nationalities and age groups participated in the campaigns.

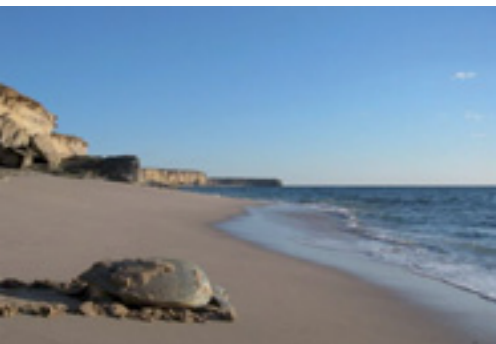


## “Together for Oman” the protection of Oman’s marine turtles

As part of the celebrations for International Biodiversity Day 2010, the Omani Environment Society, in cooperation with the Ministry of Environment and Climate Affairs and the Ministry of Education, organized the campaign “Together for Oman” to protect the marine turtles. The campaign was organized on Masira Island in May 2010, and was attended by a number of participants representing the Omani Environment Society, Ministry of Environment and Climate Affairs and other stakeholders interested in Masira. The event was marked by the attendance of five renowned experts from the USA and Canada on preserving nature and turtle protection.

The program included a training workshop for supervisors with the Ministry of Environment and Climate Affairs and the research team in the Omani Environment Association. In addition, a start was made to a survey and monitoring process for nesting turtles that lasts until the end of September, to installing tracking devices on a number of female turtles, and a public awareness campaign within the local communities on the island. The event also included lectures for the Omani Women Association in Masira on the five types of turtles frequenting Omani waters: Sharfaf, Green, Rimani, Namla and Zeitona.

During October 2010 (the end of the nesting season for loggerhead turtles) members of the Omani Environment Society visited Masira Island to complete the program with a number of presentations and lectures in the local schools, where they explained to the students the efforts by the society during the nesting season, and its results. The presentations included a video titled “the life of turtle observer” prepared by the society to present and explain the methods used by the turtle observers to obtain accurate information on the Rimani turtles.



## Floating berths campaign

The coral reefs provide shelter and food for many marine creatures. The coral reefs are thousands of years old, and diving is regarded as one of the most exiting sports in Oman due to the varied marine environment and the large numbers of coral reefs. However, some of the best sites in Oman have no floating berths, which means that boats have to use their anchors and this causes damage to the fragile coral reefs and to the environmental

balance.

Providing floating berths will significantly reduce the damage to the coral reefs, and so the Omani Environment Society, in cooperation with the Ministry of Environment and Climate Affairs, adopted a campaign to provide floating berths at the diving sites. 12 floating berths were installed in 2010, and it is expected that this will help to reduce damage to the reefs.

## Cleaning and forestation and awareness campaign in Wilayat of Adam

The Oman Eco Group organized a cleaning and forestation and awareness campaign in the Wilayat of Adam, Dakhliya Region. The event was sponsored by Oman Telecommunications Company, and supported by certain official authorities including Muscat Municipality, Adam Municipality and a number of companies supporting the event. More than 100 volunteers took part in the campaign by planting around 150 trees, cleaning internal roads leading to the local Falaj (traditional irrigation canals) and distributing brochures encouraging the perseverance of environment and biodiversity. The campaign concluded by a ceremony to distribute gifts to the participants.



## Field visits to the natural reserves and wildlife rehabilitation and propagation centers

The Ministry of Environment and Climate Affairs, in cooperation with other government authorities, organized a number of field visits for students and the environment sector to visit the natural reserves and wildlife rehabilitation centers where the participants were provided with a firsthand view on the programs used on location, and various achievements in preserving the natural and wildlife areas. The events aimed at increasing awareness of the achievements of government and other stakeholders in protecting biodiversity.



## Public celebrations

In order to convey an environmental message and introduce the objective of the International Biodiversity Year 2010 to all communities, the Ministry of Environment and Climate Affairs, in cooperation with other stakeholders, organized a number of public events including competitions, children theatre, arts and coloring exhibitions and documentaries on biodiversity in Oman. The highlight of these celebrations was the Earth Day of 22 April 2010, and the public celebration at the Festival Ground in Salalah during the monsoon season which was received with great enthusiasm by a large audience enjoying a variety of educational and awareness activities. The events included theme plays and competitions, sessions on coloring and drawing and talent shows. 🌱



## Education

### The Green Wave May 2010

This is a global initiative to plant one billion trees under UNEP, supported by international, government and national organizations. The campaign seeks to engage young people in order to increase their awareness of biodiversity. The campaign aims to plant one tree in each region around the world at 10 am local time on May 22nd every year (International Biodiversity Day) with the intention of planting one billion trees around the world.

Within the celebration of the IYB 2010, Oman participated in this campaign for the first time since it began in 2007. Oman's participation was launched through the 1st Biodiversity Exhibition with the participation of several schools including the Rihana Zaid Basic Education and Shinas Post Basic Education schools. More than 23 schools with various age groups participated this year. More information on the participating schools and planted trees may be obtained through the campaign website:

<http://greenwave.cbd.int/en/home>

### IYB 2010 corner at the Children Museum

In cooperation with the Oman National Commission and the Ministry of Culture and Heritage, a special corner was dedicated for IYB 2010 at the Children Museum. The aim was to increase public awareness, introduce museum visitors, especially students, to biodiversity and the importance of preservation, and present materials published by UNESCO and the National Commission for this event. The corner was fitted with a large TV screen presenting documentaries on biodiversity, in addition to posters, leaflets and various other publications dealing with aspects of biodiversity.





## Scientific trips for students

School scientific trips are considered one of the most effective activities in raising students' educational, social and cultural awareness. The trips provide students with the opportunity to examine and identify natural environments, connect with the community and the environment and relate the classroom theories to reality. The Ministry of Environment and Climate Affairs, in cooperation with the Ministry of Education, organized a number of field trips in order to train students on bird watching, identifying wild plants, working closely with researchers and experts in identifying and classifying species of birds and plants.



## Open Day for Al Izdihar School

On January 20, 2010 the Oman Eco Group, in cooperation with Al Izdihar School, organized an open day for the students. The event was in conjunction with Muscat's "In our Hearts" campaign aiming to keep the city clean and ensure a healthy environment. During the day the group participated in various environmental activities, focusing on awareness and protection and safety of all living creatures within the ecosystem containing human activity. The events included competitions and plays, and the day concluded by planting a number of trees in Naseem Public Park.



## Open Day for school students on the sideline of the Gulf Eco Exhibition 2010

As part of the Gulf Eco 2010, an open day was organized for students during which participants were encouraged to show off their talents in using natural materials and drawing and painting. The aim was to increase awareness in an entertaining way through drawings dealing with the environment and nature, and to highlight certain environmental problems along with recommended solutions and mechanisms to preserve the natural environment.



## Activation of the turtle center in Ras Al Hadd to support the objective of the IYB 2010

The Ministry of Tourism, in cooperation with Oman LNG and other private sector companies, established this scientific center at the Ras El Jinz natural reserve for turtles, in the district of Ras El Hadd, Wilayat of Sur. The center has several objectives including studying the turtles and marine life in the region, providing a comprehensive database for the concerned government authorities, providing an opportunity for experts to carry out research and studies that contribute to preserving this exotic environment. Within Oman's celebrations of IYB 2010, visits were arranged to enable students to find out more about turtles on Omani beaches, and identify their life system and the hazards they face.

The Omani beaches host five species of turtles. The Green Turtle is the most common species found in Ras Al Had, and it feeds on marine grass and algae in contrast to the Leatherback which feeds on the flowers growing on the algae. The coral reefs provide the perfect grazing ground for the Hawksbill turtles using their long extended mouth to feed on the marine sponge. The Olive Ridley turtles live on crustaceans and the loggerhead turtles feed on invertebrates and mollusks. The lifestyle of turtles has always been of interest to the visitors and researchers enjoying watching the turtles coming to the beaches to lay their eggs. 🌿

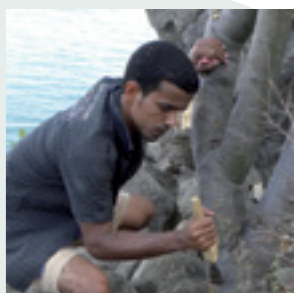


## Research and academic projects and activities

### The Frankincense Project

Frankincense trees are the most famous trees in Oman. For hundreds of years this tree was the main and sole source of income for the people of Dhofar. For over 7,000 years ancient civilizations were founded on the frankincense trade, along with gold and precious stones, one of the most precious goods at that time. The frankincense was shipped to ancient civilizations in India, Rome and China, allowing Dhofar to become prosperous. Today, frankincense is used in virtually every house in Oman and most Arab countries. The frankincense tree plays a significant social and environmental role, and also the source of pride and expression of traditional Omani heritage. The tree also contributes to environmental protection as it helps to prevent soil erosion. However, recent growth rate monitoring indicate excessive cutting of the trees to extract the frankincense, and this is causing damage to the trees which is difficult to repair. Recent world climate changes may also be having an impact on the trees in Dhofar.

The Omani Environment Society initiated this project in 2010 to protect the frankincense trees. The project aimed at identifying ways to cut the trees, and the time required between each process to ensure best return without damaging the tree, in addition to public awareness of the potential impact of climate change on the trees.



### Biological study of five species of commercial fish in Dhofar

The Ministry of Fisheries Wealth launched this project with the aim of studying the lifecycle and growth rate of five important species of fish in the coastal area of Dhofar (Arabian Sea) and to assess the stock. The project also discussed fishing equipment used for these fish and the marine and environmental conditions in Dhofar affecting these fish species. The project provided scientific information on the stocks of the targeted species and this will assist in improving their management in order to ensure their sustainability. The project concluded by recommending a management plan regulating fishing and ensuring best practices.

## Project assessing the microorganisms biophysical developments and their interactions in the Omani waters

The Ministry of Fisheries Wealth initiated this project in order to establish a database on environmental changes in Omani waters. The aim was to use this information to understand the biophysical changes of microorganisms, its relation to the Red Tide phenomena and the fish kill incident, to analyze the Red Tide and oxygen shortage in order to determine its relationship to phytoplankton and bacteria. The project resulted in establishing a database on environmental changes related to phytoplankton and bacteria responsible for the Red Tide and the fish kill incident. To support the project's findings, data will be collected from all Omani coastal areas, and the biophysical and chemical elements will be analyzed together with carbon, nitrogen, chlorophyll and bacteria. In addition to determining the types phytoplankton and bacteria using equipment from SQU and the Marine Science and Fisheries Center. The project data and database will assist researchers and experts in future studies.

## Preserving whales and dolphins



Oman hosts around 20 species of cetaceans (the common name for whales and dolphins), and the project aimed at assisting whales and dolphins stuck beaches, and to identify their locations in Omani waters in order to help protect their habitats. In 2010 the Omani Environment Society carried out field surveys off Masira Island and Ras Madraka, one of the most populous areas for breeding and feeding for the endangered Arabian Whale, unique in this region. Water telephones (underwater sonic recording devices) were used to record the sounds and songs of the whales to understand their behavior. New and developed cameras were also used to determine the locations and types of each species.

## Turtles' protection project

In Oman there are 5-7 species of turtles, with large numbers of green and loggerhead turtles. Ras Al Hadd is one of the most populous areas for the green turtles in the world. The population of loggerhead turtles in Masira can be compared only with the turtles on the coast of Florida in the US; taken together, around 80% of the female species in the world are found in these two areas.

In Oman, there are more than 350 beaches frequented by the turtles, and it is believed that the coastal waters support the growth of the green and sharfaf turtles. Thus Oman is one of the best places in the world for turtles with tens of thousands of turtles in Omani waters.

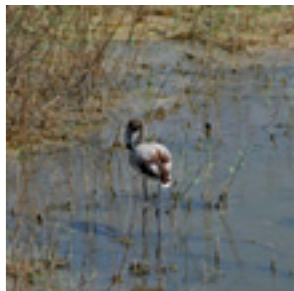
The turtle protection project aims to assess the number of female loggerhead turtles nesting annually from May to September, and to find out more about the turtles by tracking them by satellite and electronic stickers enabling continuous monitoring and follow up. The project continued throughout 2010 in assessing the nesting and hatching of eggs and, with the assistance of volunteers and students, stickers were attached to five loggerhead turtles in Masira Island.



## The natural reserve project in Dimaniyat Islands

In 1996 the Dimaniyat Islands were declared a protected natural reserve by virtue of Royal Decree. The islands occupy great significance locally and regionally, due to the high concentration of nesting marine birds, and it being the only place in Oman where the "Shamat" eagles come to build their nests. In addition, the reservation has the largest concentration of Sharfaf turtles coming to nest on Omani beaches. The Dimaniyat Islands and its virgin nature, represent a very important natural museum, and the habitat for various terrestrial and marine creatures, like the green turtles and the vast coral reefs and large number of eagles.

This on-going project aims to survey and research wildlife, marine life and natural resources on the island, and evaluate the tourism, education and training opportunities that are consistent with the preservation plan. In 2010 the Omani Environment Society carried out a survey of the coral reefs and observed the nesting of turtles on the beaches around the island. The activities will assist in increasing knowledge on the activities of wild animals on the island, and on the use of suitable management tools.

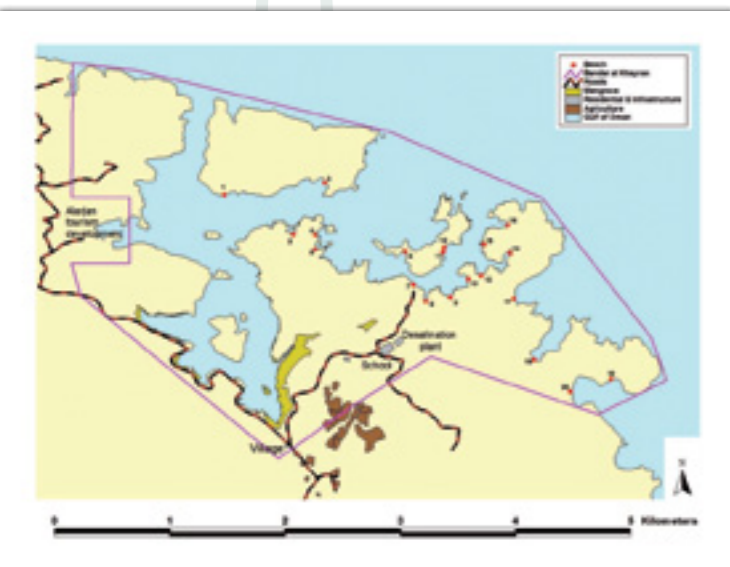


## Quantitative and qualitative distribution of marine organisms in the Sultanate of Oman

The project aims to study fish biodiversity; to solve any taxonomical problems that might be present in several fish families; to study the geographical and temporal distribution of the fish species living in the studied area; to build a specific data base to hold the results of the project and make it available for any future use; to train Omani technical staff on the daily routine work of the project and on different aspects of scientific research on fish taxonomy.

The results of the project showed that a total of 986 species of fish live in the Sea coasts of Oman. They belong to 156 families. Of this number, there are 919 species of bony fishes belonging to 135 families and 67 species of cartilaginous fish (sharks and rays) belonging to 21 families.

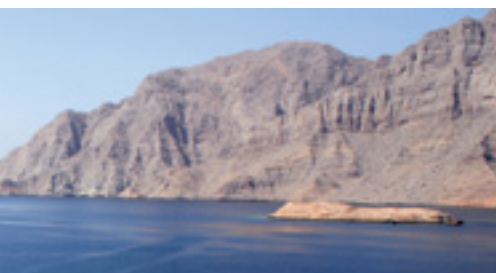
### Bandar Al Khiran Development Project



Bandar Al Khiran is about 20 km to the south east of Muscat. The area is determined by a royal decree and covers around 1,030 hectares and consists of a number of islands and small inlets overlooking the Gulf of Oman. The area is mostly barren and consists of beautiful hills with various geological formations including limestone and dolomite. The area is arid and average annual rain is no more than 90 ml, mostly caused by the wind blowing from the east of the Mediterranean. The area has very high temperature and humidity levels, and according to the 2003 census, there are around 900 people living there. The area has a school and water desalination plant, and the local communities live on fishing and palm trees

sufficient for local consumption. Animals in the area are limited, consisting mainly of goats next to the villages.

The annual report of the World Wide Fund for Nature (WWF) on the environmental areas overlooking the seas of Oman, including Bandar Khiran, indicates that "this environmental area is a heaven for bird watchers, with more than 400 species of birds." The Arabian Peninsula is very important for



migrating birds in their journey between Africa and Asia. This area, located on the Arabian Gulf and the Sea of Oman, is very rich considering the large number of inlets and flat mud beaches and natural mangroves, making it the ideal place for bird nesting and feeding. Other features include the coral reefs, mangroves, birds, turtles, gazelles and its unique fauna. The Ministry of Tourism is currently devising a plan for the area, focusing on preserving biodiversity, supporting cultural wealth and achieving returns for the local communities by using sustainable environmental resources.

## Biology and dynamics of the pelagic fish in Omani waters and it's economic significance.

Through this project the Ministry of Fisheries aimed to evaluate the stock of pelagic fish with economic value, and set practical methods for fish management to ensure sustainability of the fishing industry, and evaluate the best use for three species of of pelagic fish of economic value. The study also aimed at determining the genetic features of the targeted fish, and studying the extent of its interaction with the population in other areas, and the biological characteristics of the pelagic fish and its associated ecosystem.

The study resulted in several significant findings including knowledge of quantities for commercial use, reducing the depletion of fish and recommending policies to manage the resources. The results may have an impact on the GDP through identifying fish stock that will improve the socio-economic conditions for the fishermen, and develop new and modern fishing methods to increase the return and create new employment opportunities.





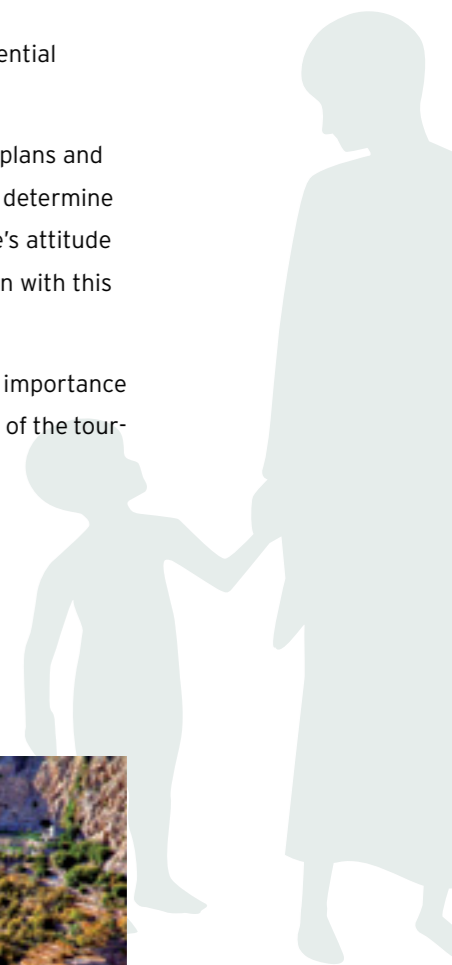
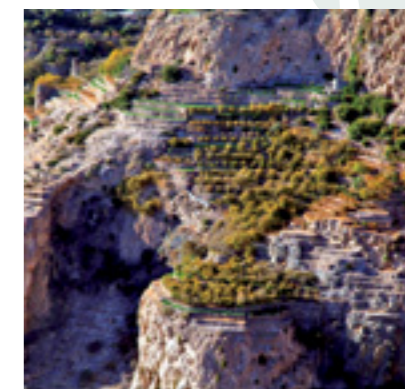
## Socioeconomic dimensions of tourism development in Al Jabal Al Akhdar

The Ministry of Tourism, in cooperation with SQU, carried out a study to determine the socioeconomic dimensions of tourism development in Al Jabal Al Akhdar. The aim was to assist in the development and stimulation of the local communities and their contribution to tourism development in order for them to achieve benefit without disturbing the socioeconomic and environmental assets.

The study was in three phases:

1. Descriptive study of the natural and human inputs from specific geographic and demographic conditions, social features and urban development
2. Field study of the tourism movement and its potential socioeconomic impacts
3. Analytical reading of the recommended tourism plans and their potential socioeconomic impact in order to determine the benefits to the local communities, the people's attitude towards tourism and positive/negative interaction with this new activity

The study resulted in several recommendations focusing on the importance of stimulating the local communities and increasing the benefits of the tourism development in Al Jabal Al Akhdar.



## Publications

### Success Story

The film "Success Story" was produced in appreciation of individual initiatives and was produced in cooperation between the National Commission and the Ministry of Agriculture. The film documents the story of a local farmer who restored his farm after it had been destroyed by the hurricane "Guno" that hit Oman in the summer of 2007. Floods swept away vegetables and fruits growing on the farm of Mr. Rashid Abdullah Al Bulushi. With resolve and determination he managed to restore his farm and, by planting trees in a more organized and planned manner and using modern technology, he was able to achieve even better return from the farm than before.



### Posters and brochures

All parties interacting with IYB 2010 issued several educational posters and brochures promoting IYB. The following are examples of a number of these publications.



**2010** **الموجة الخضراء**  
The Green Wave  
One School, One Tree, One Gift to Nature

**حملة الموجة الخضراء**  
The Green Wave

في مبادرة عالمية انضمت إلى حملة برنامج الأمم المتحدة للبيئة UNEP  
التي تعزز في حملة الموجة الخضراء، تم تبنّي برنامج الحملة الذي من التعليم على الربط التالي  
<http://greenwave.undp.org>

**التنوع الأحيائي هو الحياة**  
التنوع الأحيائي هو حياتنا

2010 السنة الدولية للتنوع الأحيائي

ما هو التنوع الأحيائي؟  
هو التنوع في جميع أشكال الحياة على الأرض، من البكتيريا الصغيرة إلى الإنسان، من النباتات والحيوانات والفطريات والطلائعيات والبروتينات، وكل ما يسكن كوكبنا، من المحيطات إلى الصحاري، من الجبال إلى السهول، من الغابات إلى الصحاري.

ما أهمية التنوع الأحيائي؟  
التنوع الأحيائي هو الأساس الذي تقوم عليه الحياة، وهو الذي يجعلنا نحن البشر قادرون على العيش على كوكبنا. كما أنه يلعب دوراً هاماً في الحفاظ على البيئة، وتوفير الغذاء، وتنظيم المناخ، وحماية المياه العذبة، وغيرها من الخدمات التي تقدمها الطبيعة للإنسان.

ما هي التهديدات التي تواجه التنوع الأحيائي؟  
التنوع الأحيائي يتعرض لتهديدات عديدة، أهمها: فقدان الموائل الطبيعية، والتلوث، والتغير المناخي، والصيد الجائر، والانتشار البيولوجي، وغيرها من العوامل التي تؤدي إلى انقراض الأنواع.

كيف يمكننا حماية التنوع الأحيائي؟  
يمكننا حماية التنوع الأحيائي من خلال اتخاذ تدابير عديدة، منها: حماية الموائل الطبيعية، وتقليل التلوث، والتكيف مع التغير المناخي، والحد من الصيد الجائر، وغيرها من الإجراءات التي يمكن اتخاذها.

2010 السنة الدولية للتنوع الأحيائي  
www.unep.org/biodiversity

**2010** السنة الدولية للتنوع الأحيائي

الهيئة الوطنية للتنوع البيولوجي  
2010

مجلس دولة الكويت، ديوان الرئاسة، الكويت، ص.ب. 219، 13110 سقفة، الكويت

**2010** السنة الدولية للتنوع الأحيائي

**BIODIVERSITY IS LIFE IS OUR LIFE**

**2010** السنة الدولية للتنوع الأحيائي

**التنوع البيولوجي هو الحياة**  
حياتنا هي التنوع البيولوجي

Taken by Ernest Meili

**2010** السنة الدولية للتنوع الأحيائي

**التنوع البيولوجي هو الحياة**  
حياتنا هي التنوع البيولوجي

**BIODIVERSITY IS LIFE IS OUR LIFE**

2010

**2010** السنة الدولية للتنوع الأحيائي

**التنوع البيولوجي هو الحياة**  
حياتنا هي التنوع البيولوجي





**Tourism and Biodiversity**  
 Ministry of Tourism  
 Sultanate of Oman  
 World Tourism Day  
 27 September 2010

Ministry of Tourism  
 2010  
 Ministry of Oman  
 TOURISM & BIODIVERSITY

**السياحة تحتفل بالتنوع الطبيعي**  
 السياحة  
 سلطنة عمان  
 يوم السياحة العالمي  
 ٢٧ سبتمبر ٢٠١٠

Ministry of Tourism  
 2010  
 Ministry of Oman  
 TOURISM & BIODIVERSITY

**Harmful Algal Blooms Phenomenon**  
**{ Red tide }**  
**In Omani Waters**

Ecology and Oceanography Section  
 Marine Science and Fisheries Center  
 2010  
 Translation Section  
 Ministry of Environment and Climate Affairs

**ظاهرة ازدهار الهوائم البحرية الضارة**  
**في المياه العمالية**  
**المد الأحمر**

القسم  
 العلوم  
 البيئية والبحرية  
 مركز العلوم والبحريات  
 ٢٠١٠  
 القسم  
 الترجمة  
 وزارة البيئة والمناخ

A supplement by the Oman Committee for Education, Culture and Science in collaboration with **TAWASOL**

**TAWASOL**  
 Issue No. 13 - 2010  
 Sultanate of Oman

Development of Education in Oman  
 Architectural Heritage in Oman  
 The Importance of Biodiversity – risks and challenges in Oman  
 The International Year for Rapprochement of Culture 2010

ملحق تصدره اللجنة الوطنية العمانية للتربية والثقافة والعلوم مع مجلة **تواصل**

**تواصل**  
 العدد الثالث عشر - ديسمبر ٢٠١٠  
 سلطنة عمان

أهمية التنوع البيولوجي - المخاطر والتحديات في سلطنة عمان  
 تطوير التعليم في سلطنة عمان  
 التراث العمراني في سلطنة عمان

السنة الدولية للتقارب بين الثقافات ٢٠١٠

