



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

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Sultanate of Oman
Diwan of Royal Court

Issue 20

Organic Agriculture

The Safe Alternative To Sustainable Environment



Defination from the Omani Law

Nature Conservation Areas

They are areas designated for the conservation of one or more species of wildlife, specially endangered species which are prohibited to be removed, hunted, transported or damaged, such species. As well, Nature Conservation Areas include archaeological areas, landscapes and public parks.

Environmental Terms

Environmental System

It is a system in which periodical exchange of matter and energy takes place due to interactions between different living components (plants and animals) and non-living components (air and solids). It can also be defined as the gathering of organisms from plant to animal in the form of vital societies, interacting with one another and with the environment in which they live. So, the forest, the lake and the mountains are all environmental systems.

point of view



Lack of awareness

Dawood Sulaiman Al Balushi
Editor-in-Chief

The 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 awarness 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.

>> A Group of Wildlife Violators Arrested

Rangers belonging to the Ministry of Environment and Climate Affairs' Wildlife Protection, in cooperation with specialists from the OCE and the Royal Oman Police, have succeeded in arresting wildlife violators in Qintar town at Wilayat of Quriyat. The details of the incident started when wildlife rangers belonging to the Ministry of Environment and Climate Affairs, received many reports indicating hearing of gun shooting in the past few days. Then the wildlife rangers investigated about the reports, focusing on the site where reports gun were heard. The Rangers heard the gun shots themselves the day before yesterday at the site and immediately coordinated with the Office Of Conservation of Environment and Royal Oman Police to provide support and assistance. The aggressors were raided, two persons possessing weapons were arrested. The weapons



and a one Ghazal were confiscated. After that, the matter was referred to the Qureyat police station as a prelude to submitting it to the competent authorities in the State. What these people have done is considered as violation to paragraph (b), Article (15) of the Royal Decree No. 62003/ issuing the Law of Natural Reserves and Wildlife Conservation which stipulates that «anyone who deliberately kills, catches or smuggles any Animals or birds listed in Annex (1) or any genetic material thereof shall be punished by imprisonment for a period not less than six months and not more than five years and a fine not less than (1000) Omani Riyals and not exceeding (5000) Omani Riyals Or by either of these punishments". The Ministry of Environment and Climate Affairs calls on citizens and residents to obey the laws, regulations and legislation in force in this regard in order to avoid assaulting elements of wildlife and legal accountability.

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>> The National Field Research Centre for Environmental Conservation Participates in a Workshop on the Socio - Economy Dimension of Environment Conservation

Photos by: Abdullah Alsabei

The National Field Research Centre for Environmental Conservation participated in the workshop on «The socio - economy dimension of environmental conservation», organized by Sultan Qaboos University on the sidelines of the forum on «Linking Higher Education Institutions in the Public and Private Sectors», in order to enhance cooperation between different institutions of higher education and governmental and private institutions, and to introduce the graduates to the specialties, tasks and activities of public and private institutions.



Protection of Environment

The seminar included three themes. The first themes was presented by the Ministry of Environment and Climate Affairs with a working paper entitled «Your conservation of the environment and its resources is an investment in the environment.» Through the paper, Badr Al Balushi, head of the Wetland Environments Section at the Marine Environment Department, reviewed the protection of environment in general and the efforts to protect the wetlands in particular, as well as the role of the Ministry of Environment in restoration of deteriorating sites, rehabilitating of new sites through the implementation of the project for Planting Mangrove Trees and rehabilitation of the Khors, where more than 571 thousand seedlings were grown. Al Balushi also reviewed the approach adopted by the Sultanate in the field of environmental planning, and how it contributed to the survival of natural resources in general and wetlands in particular and kept them safe, not affected by the elements of comprehensive development in all its aspects. Through its membership in various regional and international organizations and signing of most concerned conventions, the Sultanate is also keen to participate with the international community in the efforts to protect the environment and natural resources.

Environmental Field Research

The National Field Research Centre for Environmental Conservation presented the second themes of the seminar, where the specialist and supervisor of research projects, Engineer Khalifa Al-Hijji, reviewed the role of field research in the preservation of the environment. Al-Hijji pointed out that the environment

■ **Reviewing the Sultanate's approach to environmental planning and its contribution to the survival of natural resource**

■ **Discussing the role of field research in preserving the environment and the Sultanates interest in environmental research institutions**

■ **Considering the importance of environmental awareness among institutions that practice activities require the use of renewable and non-renewable resources**

has been one of the main goals and tasks of the Centre mission because of its direct impact on human life and the daily human activities. That is why conservation of the environment comes at the forefront of the strategic and development plans developed by States. So, many countries are very keen to develop programs and activities that help to preserve the environment. As well,



many countries have enacted strict laws and regulations that prevent infringement in any way, recognizing that the environment is the central foundation in the development of man and society.

Engineer Khalifa said that this growing global environmental awareness, made the countries of the world interested in environmental research, believing that the scientific knowledge of environmental issues in all its aspects, as well as the professional scientific analysis and developing of solutions, are the most successful ways to deal with environmental issues. The increase in economic, technological and industrial development has resulted in many serious environmental issues and problems that have directly affected human, environmental and life. Al Hijji pointed out that the Sultanate is at the forefront of the countries on the Arab and global level, which has been interested in environmental research, which was translated through the establishment of environmental research institutions

that are concerned with environmental research. He stressed that field research is the basis of environmental work for putting in place scientific strategies in the field of environment. That is because field research is based on the right studies, investigation and the right utilization of the research and studies result using them in effective employment policy to contribute to and support the national economy of the Sultanate and the social aspect as will, which is reflected in the participation of segments of society in the protection system.

Environmental Awareness

The third theme of the seminar was to discuss the importance of environmental awareness among the institutions that practice their activities by using renewable and non-renewable resources. That was the topic of a paper presented by Said Al-Saqri the PDO's environmental consultant. He reviewed his company's experiences in the field of renewable energy Projects, and how to comply with environmental safety requirements.



Organic Agriculture

The Safe Alternative To Sustainable Environment

Serves to Produce Food in Safe and Environmentally Ways



Modern trend in recent decades towards organic agriculture of various kinds is a return to the traditional methods of natural agriculture which was adopted by humans before the discovery of chemical pesticides and industrial optimizers. Organic agriculture is a modern agricultural system (due to the use of modern technologies that increase the economic value of the project) to produce food in safe and environmentally ways, at the same time achieving economic feasibility and social justice. The organic farming system relies on the use of bio-natural materials, rather than chemical fertilizers, pesticides, breeds, genetically modified organisms, ionizing radiation or preservatives in manufacturing processes



Back to Nature

The idea of organic farming is to try to deal with nature instead of dealing against it. This involves recycling natural materials to maintain soil fertility. It also requires the encouragement of natural methods to control plant pests and diseases, rather than relying on chemicals.

Environmental Balance

The basic principles of organic agriculture closely follow the principles found in the natural environment, where the farmer follows the organic way with an environmental awareness that recognizes that acceptable balance in natural environment preserves the ability to coexist for all beings without negatively affecting each other.

Environmental Benefits

1. Long-term sustainability: Many of the observed changes in the environment are considered as long-term changes and occur slowly over time. Organic agriculture

■ Studies have shown that chemical pesticides stay in the liver for a long time, increasing the incidence of serious diseases such as cancer and all types of liver and blood diseases



Types of Organic Agriculture

There are many types of organic agriculture, which are committed to the right way and good management does not depend on pesticides, chemicals, growth improvers, hormones and polluters of the environment. Such types of farming are all can be without soil. plants grown on non-soil bases or planted directly in the water. Plants can be grown on the porous medium to fix the roots, such as brittle, bitmose or gravel. Examples of such include the cultivation of plants on the soil (Gioponic), on water (Hedroponic) or on (Aquaponic). It is an agricultural system where breeding of fish or other aquatic organisms can take place with plants in the same System. Aquatic organisms and fish nutrients provide nutrients for plants and the plants purify water from pollutants. Or even grow plants in the air (Aerobonic),» said Dr. Abdullah Al-Ghafri, Assistant Dean for Training, Director of Aflaj Research Unit at the Life and Chemistry Sciences, Biology Division, Faculty of Science and Arts, Nizwa University. Dr. Al-Ghafari said that the idea of hydroponics is one that mixes nutrient solutions with water and also oxygen so that the roots touch the water to take the nutrients. Al-Gafri divided Hydroponics Aquaculture into six types: the drip system, the flood and drainage system, the waffle system, the immersion system, the aerobic system and the NFT nutrient slice system. In all these ways the basic tools are water tank, small water pump, air pump and pipe.



■ **The organic farming system depends on the use of bio-natural materials, rather than chemical fertilizers and pesticides**

■ **Farmer realizes that the acceptable balance in the natural environment maintains the co-existence for all beings**



■ **Organic agriculture studies the medium- and long-term impacts of agricultural interventions on ecosystems**

■ **Maintains soil biodiversity and reduces nutrient losses, which helps maintain soil productivity**



An Omani Model

Al-Radwanayah farm in Sinaw is one of the Omani models in the field of organic agriculture. The forms of organic farming vary from traditional organic farming which depends on soil, organic farming through greenhouses, and finally the paper farming based on aquaculture. About his experience with organic agriculture, Dr. Salem Bin Hamd Al-Mahrouky said that it is a rich experience despite the challenges faced it, the most prominent is the non-spread of this type of plantations, lack of such culture among the contractors who do not differentiate, pricewise, between it and other agricultural products that rely on pesticides. Nevertheless, such agriculture income has begun to increase, and the difference between it and other plantations is spreading, which made such crops achieve the desired economic return.

studies the medium- and long-term effects of agricultural interventions on agricultural ecosystems. It aims to produce food with an ecological balance to avoid problems of soil fertility and pests.

2. The Soil: Soil depends on soil-building methods such as crop and agricultural cycles, symbiotic associations, cover crops, and organic fertilizers, as well, such methods encourage soil animals and plants to improve soil components and to establish more stable systems. On the other hand, the nutrient and energy cycle and the soil properties of nutrient and water retention are increasing as well as the compensation for non-use of mineral fertilizers. Management techniques can play an important role in combating soil erosion. The length of time in which soil is exposed to erosion forces decreases to increase soil biodiversity and reduces nutrient losses, which helps to maintain and enhance soil productivity. Soil losses are replenished by continuous renewable resources from the farm but are sometimes necessary to supplement organic soils with potassium, phosphate and calcium Magnesium and the rare elements from external sources.

3. The Water: Pollution of groundwater streams with synthetic fertilizers and pesticides is considered as a major problem in many agricultural areas. As the use of these substances is prohibited in organic farming, they are replaced with organic fertilizers (e.g. compost, animal manure, green manure) and by using greater biodiversity (in terms of cultivated varieties and permanent vegetation), this will strengthen soil texture and reduce water leakage. The better managed organic systems that characterized by better capacity to maintain nutrient retention, will lead to a significantly reduction in the risk of groundwater contamination.

4. The Air: Organic agriculture reduces non-renewable energy use by reducing agrochemical requirements (requiring large quantities of fuel). Organic agriculture contributes to mitigating the effects of warming and global warming through its ability to absorb carbon in the soil. Many of the management practices used by organic agriculture (such as minimizing tillage and increasing the inclusion of nitrogen-fixing legumes) increase the return of carbon to the soil, resulting in increased productivity and favorable conditions for carbon storage. Therefore, the call for the use of organic and biological agriculture and biological resistance has become a necessary requirement to protect the environment from pollution and raise the level of agricultural production and export competition with other countries.

Consumer Health

Chemical compounds are very dangerous, as their effects remain in our vegetables, fruits and food that we eat every day. Studies have shown that these compounds retained kept in the liver for a long time, which explains the increase of people who suffer serious and incurable diseases such as cancer and all types of liver and blood diseases. Because our children are very precious and dear to us, we must take care of our health, by using safe organic agriculture, which has been experienced by all generations of mankind since the beginning of civilization and until 100 years ago, before these dangerous pollutants appear.

■ **Dr. Abdullah Al-Ghafri: There are many types of organic farming that adhere to the right way and are done without soil**

■ **Contributes in mitigating the effects of global warming through its ability to absorb carbon in the soil**

«Bee'ah» Considers O-ring Economy Reality and Hope

Oman Environment Holding Company (Bee'ah) participated in the gathering with a paper entitled «O-ring Economy in Oman: Between Reality and Hope», which dealt with the concept of circular economy, waste management in the Sultanate, the policy of operating the municipal sector's waste, the policy of transferring waste from landfill, the policy operating the industrial sector's waste. The company's strategy for transferring waste from landfill is centred around reclaiming value from waste in general and municipal waste in particular through the production of waste energy to use it for desalination and production of fuel from waste products, as well as producing steam from waste and using it in the operations of oil extraction and biogas projects.

Promoting Sustainable Development through Education

In the First Oman Environment Forum, the Ministry of Education participated with a working paper on the Importance of Sustainable Development in the Ministry's Educational Process. The paper stressed that sustainable development has attracted the attention of educators, so they apply the principles of sustainable development in the educational process, focusing on raising the learner to become a responsible citizen and productive worker in his homeland. One of the most important pillars of citizenship is the instilling of values and principles. That is because the values are the basis for the Omani citizen personality, from which he derives all his actions. Every individual has some values since his first emerged to life. Those are the values instilled by the family in the hearts of its children. Then comes the role of the school as a community institution that contributes to the upbringing of the individual or the generation as a whole, in consistency with the values of society and loyalty to homeland. The paper confirmed that the Ministry seeks, through its directorates, its programs and activities, to raise awareness on values and principles that promote the preservation of national identity.

Oman Environmental Forum .. Recommends The development of a comprehensive national vision for achieving the sustainable environmental development



The first Oman Environmental Forum, «Sustainability in the Omani Environment», the first-of-its-kind organised in the sultanate.

It is the result of cooperation between the Office of Conservation of Environment in the Diwan of Royal Court and Al Roya newspaper.

The forum included a number of experts, specialists and those concerned with environmental affairs from inside and outside the Sultanate. The 1st Oman Environment Forum themed «Environmental Sustainability in Oman: Challenges and Future Potential» stressed at the end of its meeting, the importance of developing a comprehensive national vision to implement sustainable development programs for future generations in line with the Global Agenda 2030.

The forum also stressed the importance of conducting a national survey of all national strategies and policies to



determine their compatibility with goals of sustainable development. The forum also underlined the importance of preparing realistic indicators to monitor and evaluate the performance of environmental conservation in order to monitor the implementation of objectives of sustainable development and the response to environmental risks through long-term strategies to achieve the required sustainability, together with all stakeholders.

Further, the forum highlighted the importance of rehabilitating workers in the green tourism sector in order to increase their awareness of the importance of preserving the environment and encouraging the private sector to invest and contribute to the implementation of environmental projects, as well as the importance of encouraging public and private institutions to create decent green jobs for Omanis.

The Ministry of Environment Outline the Omani Experience in Environmental Sustainability

In the First Oman Environment Forum, the Ministry of Environment and Climate Affairs outlined the Sultanate's experience in environmental sustainability and the efforts exerted by the Ministry in this regard. This came in the Ministry's paper under the title: «The Omani Experience in Environmental Sustainability». The paper pointed out the Sultanate have been aware since the dawn of the blessed Renaissance in the early seventies, of the importance of establishing balance between the requirements of economic and social development, protection of ecosystems and management of climate change, thanks to the vision of His Majesty

Sultan Qaboos bin Said. His Majesty emphasized the necessity of establishing the basic principles of environmental work within the framework of an integrated strategy of development system that takes into account the advancement of economic and social aspects, the importance of preserving ecosystems and conserving the natural resources in order to achieve environmental sustainability and achieve the goals of sustainable development in various development sectors of the Sultanate. That why the Sultanate is keen to link the development process with the objectives of environmental sanitation and conservation of natural resources.

>> The National Centre Presents a Work Paper on «Achieving Environmental Sustainability through Conservation of Biodiversity»

In the First Oman Environment Forum, the National Field Research Centre for Environmental Conservation participated with a paper titled «Achieving Environmental Sustainability through Conservation of Biodiversity», which covered introduction on the Centre, its vision, objectives and policies, its various research projects and its vision on the protection of biodiversity in the Sultanate, as well its role in the field of environmental education.

Environmental Sustainability and Biodiversity

In its work paper, the National Centre emphasized the diversity of the Sultanate by virtue of its strategic location. The geographical nature varies in different environments, mountain environments, desert environments and marine and coastal environments. Each of these environments has a unique and unique fauna and flora diversity. The hands of civilization have spread to threaten the existence of biodiversity for the need for building, reconstruction and human activities. This has been enticed by many governments, especially the Sultanate of Oman, to take an early look at environmental issues with the vision and vision of His Majesty Sultan Qaboos since the dawn of the blessed renaissance. Taking into account the environmental aspects of planning and implementation, and has thus established

many institutions that have taken their role in enabling policies that support the protection of the environment and natural resources.

Projects of National Field Research Centre for Environmental Conservation

A paper presented at the forum pointed out that there were a number of institutions involved in the research of environment and for the protection of bio-diversity and various methods to protect the biological diversity in the Sultanate. The National Field Research Centre for Environmental Conservation (NFRCEC) works in the field of environmental conservation. It is important to carry out research and environmental studies through field work, thus translating the objectives of the Centre in enhancing the role of the Omani researcher in studying the environmental impact and raising the awareness of its importance and the symbiotic relations between man and environment. The studies carried out by the centre includes the study of vegetation cover in Al Jabal Al Akhdar, the study of Arab Al Alal, the study of water-related ecosystems in Aflaj (Falaj Zagh), the study of biodiversity in Jabal Samhan and the mobile research unit among other research projects.

>> The «UNEP» Stresses the Importance of Integrating Environmental Dimension into the Goals of Sustainable Development

Dr. Iyad Abu Moghli, Director and Regional Representative of the United Nations Environment Program (UNEP) (West Asia Office), during his participation in Oman First Environmental Forum, confirmed that the World is still facing the challenges of human rights, extreme poverty, hunger, human vulnerability, conflicts, natural disasters, migration, climate change, loss of biodiversity, air pollution and limitedness of water and access to resources.

For the people who directly dependent on livelihood ecosystems, the integration of the environmental dimension into the goals of sustainable development is one of the fundamental ways to achieve the principle of sustainable development in the integration of all economic dimensions and social and environmental issues. The United Nations has a leading role in providing integrated solutions to the challenges of sustainable development.

>> «ESCWA» Considering the 2030 Sustainable Development Plan and Environmental Dimensions

Lara Jada, the researcher at the Sustainable Development Policy Division of the United Nations Economic and Social Commission for Western Asia (ESCWA), presented a working paper under the title (Sustainable Development Plan for the year 2030 and environmental dimensions), presenting an overview of the sustainable development plan for the year 2030 and the role of ESCWA in its implementation from the Arab perspective, the international and regional mandates, the role of the Arab Forum on Sustainable

Development, the preparatory meeting on environmental issues and the regional priorities of the Arab Forum on sustainable development. The paper also discussed the operational framework of the environmental dimension of sustainable development goals in the Arab region, the Arab environmental challenges, and environmental goals and objectives in sustainable development for the year 2030 plan, as well as the preparation of the framework, some issues for considerations, and environmental priorities in the Arab region.



Environmental Vocabulary

The Sea Olive Peridot

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When the sun disc falls, the darkness descends its nightly cloak, spreading clouds of tranquility on the earth. The objects then wear the veil of concealment from the eyes, but not from their kind, which understands its movement and innate nature. At these quiet moments, she descends from the sea with her brown or olive-colored coarse shield and her green skin, from which she takes her name, to the beach, crawling with her full body, that weighing up to two hundred and eighty KG, push it gently and slowly over the smooth beach sand. she is so dignified that it bleaches about 132 eggs. Then she cover it again with the beach sand to hide it from the dangers. The eggs settle in its buried pit for about two months. Then the sand opens up like a female womb to get young spread out over the beach and they nothing know except the sea direction and haven.

The statistics have show that there are about 20,000 green turtles nesting in more than 275 sites along the shores of the Sultanate. This habitat is one of the most important nesting areas in the Indian Ocean region, and is also nested in other parts of Europe, North America, The Pacific.

With its length of one and a half meters and a heavy weight, it is considered as one of the largest turtles in the world, and it is one of the oldest living turtles identified and classified about two and a half centuries ago.

Her long life span that reaches eighty year and her fins like paddles make her a professional submarine that lapses from sea to beach, does not know the politics borders, swims vigorously, and derives its fuel and food from seaweed, algae and some invertebrates such as lobster and jellyfish. she Swims on a table of bumper food.

Like other turtles, she falls prey to nature's predators. The danger stared from the first appearance, once spread from the womb of the sand. They just started to breathe and see the world, they have been prey to some marine organisms, birds and humans except few numbers. While the old turtle fall victim to other risks. The green turtle cannot pull its head inside the shield, making it more vulnerable to death and hunting.

The green turtle, a precious life aqua Peridot, adds with her olive color to the sea more beauty, value and richness.

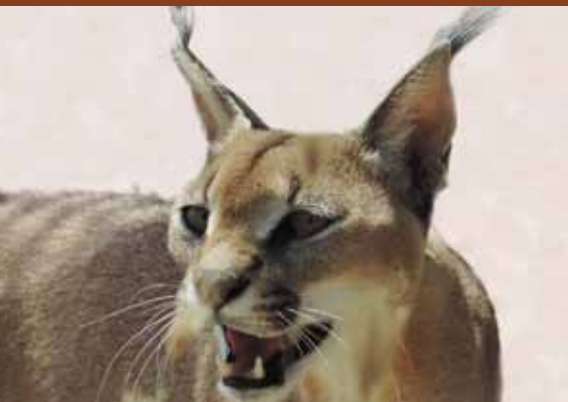
The Lynx

Isolationist, a Skillful Climber and Sharp Eyesight



By: Said Al Rashdi

The lynx is a middle-sized wild cat, characterized by pronged triangle-ears with black hair (45- cm). It is lean and long-backed with strong muscles. It weighs between 1018- kg while its length is between 8090- cm. The average age of lynx extends to 16 – 19 year. Every time it gives birth to (15-) baby lynxes. These animals have rounded faces, decorated with hair between the brown to red and a cylindrical body. It depends on the night for hunting, but sometimes hunts by day. Is one of the animals that live alone. The long legs of the lynx help to make it a skillful climber and graceful in movement. Hard hair grow on the feet of lynx to enable it to walk on sand. It has a great ability to see. The lynx female is lighter and smaller than the male. Lynx can jump for two meters in the air.



Lynx Environments and Distribution

The lynx lives in dry and semi-arid environments that provide cover for hiding, as well, it lives in evergreen mountain environments, where it nests in caves and lies on tree branches. Its spread in Africa, the Middle East and Southwest Asia, so it is classified among the Red List of the least threatened species and has the highest population in South Africa and Namibia. In Oman, the lynx is located at Al Hajar mountains, Jeddah Al Harasis, Dhofar and Musandam..

Lynx Feeding

The lance of the lynx and its long legs enabled it to be a good climber so that it can predate on the ground. In addition, it sometimes picks up its prey while it is flying. Lynx prefers to catch small mammal, less than 5 kg, such as rodents, rabbits, reptiles and birds. The lynx can jump high to catch birds while they are flying and can catch a prey twice larger than its size.

Lynx Behavior

The lynx is a night cat, and it is an isolated animal. Each male has its own part of land. It is a kingdom of its own. It defends its land and shares it with some females who mate with it tour is at night due to his ability to disappear from the eyes of its enemies and gains the freedom of movement, though it is possible to see it during the day. In addition, it prefers the easy open terrain and often the male kingdom is larger than the female kingdom. It can be determined by smells, waste, claws and intersect with the kingdoms of females.

Threats

Lynx is one of the least threatened species (less endangered), although it is rare in some parts of the world. It faced the threat of killing in some regions of the world as it hunts the herds as well as the risk of losing its environments in more than one country, in addition to the participation of the large predators of the same environment in some cases, the mater that makes the lynx in direct confrontation with them. Another risk that can threaten is the decrease of its preys.



Acceptable by Nature.. A Newly Developed Transparent Flexible Electrical Generator

Transparent, highly elastic and acceptable by nature, this combination of qualities characterizes a new material that can be used to generate an electric current from daily movements. The material is developed by researchers under the supervision of Chung Lin Mr. Wang at the Chinese Academy of Sciences in Beijing. Because this material also generates an electric current when pressed, it can be used at the same time as a pressure sensor that energizes itself. The researchers expect the use of this substance in artificial skin and soft robots or in the manufacture of electronic clothing.

The specialists call this material «Energy Harvesting». It generates tiny amounts of electrical energy from temperature differences, human's everyday movements or machines which that can be used to operate small mobile devices. There is a possibility to generate this energy using what is known as the electrostatic friction coefficient, which produces electric charges in two attached materials when separated.

Scientists: Coral Reefs Will Not Return to Their Former Glory

Scientists said that Coral reefs in the world cannot be returned to their former glory. So focus must be on helping to protect them from further destruction. According to an article published in the scientific journal (Nature), coral reefs, including Australia's Great Barrier Reef, are changing rapidly as they strive to adapt to the various impacts of global warming, overfishing and pollution. The article said that, «restoring coral reefs to their former composition is no longer an option,» stressing that the rescue of coral reefs requires a radical rethinking of the meaning of preserving the environment. «People need to accept some of the changes that coral reefs are undergoing, which helps secure the problem and can preserve its biological functions.» added the article.

«The reefs of the future will be radically different from the reefs of today or reefs 30 years ago,» said Terry Hughes.