



PROTECTING CENTRES OF BIODIVERSITY



What are centres of biodiversity?

Centres of biodiversity - also called hot zones - are regions characterized by:

- a heavy density of plant and animal species;
- a heavy density of isolated species;
- a great number of endangered species which could die out;
- a great number of species of proven economic worth.

These centres are exposed to serious dangers which threaten their survival owing to intensified human activity, and require very special attention and absolute priority as regards protection, because of their

extreme fragility.

Settled species are those whose presence is exclusively restricted to well-defined geographical areas. The area in which these settled species live may be very large, as is the case for continental vegetation, or very small - a mountain-top, an island, or an oasis. Even within a small area, biodiversity may be under threat.

Why so much interest in centres of biodiversity?

The Arab world is growing quickly; its demographic growth is exponential. To improve the people's living conditions and satisfy their needs, it is vital that roads be built, and new land constantly devoted to building towns and factories, as well as new tracts of agricultural land to feed the people, this also requires the mobilizing of nature resources. First and foremost water resources, whether this is to provide the people with drinking water or for agriculture and industry. All this can only be done at the expense of other living things (plants, animals and micro-organisms).

Further, several human activities cause pollution of natural resources and the production of pollutant agents, which threaten the survival of a large number of living organisms, the ecosystem, and the ecological balance.

The Arab world is among the places in the world where biodiversity is richest and most varied. This is because it is the place where three continents meet (Asia, Africa and Europe) and because it borders on the Indian and Atlantic Oceans and the Mediterranean Sea, the Red Sea, the sea of Oman and the Arabian Gulf. Thus the Arab world contains all the ecological systems which are specific to those regions, plus a number of isolated species which have adapted to the deserts and oases and have become very rare species.

The centres of biodiversity are at serious risk because in most cases they are not protected, and are even unrecognized. They are thus exposed to all types of human activity; grazing and excessive tourism, wastage of water resources, deforestation, urban expansion plus natural catastrophes such as drought, erosion, the forward march of the desert and fires.

Protecting centres of biodiversity is even more important - for ano-

ther reason: the living organisms that they shelter (fauna and flora) frequently have therapeutic value and are used in traditional pharmacopoeia or in the industrial manufacture of medicines. They also have proven economic worth as a renewable source; and of course there is their ecological value and the important part they play in preserving the ecological balance, as links in the various chains of biodiversity.

What part can you play in protecting centres of biodiversity?

- Helping localize centres of biodiversity in your area;
- Defining the main dangers that threaten biodiversity in your area;
- Contracting the concerned authorities to start a programme of protecting centres of biodiversity;
 - Taking part in raising citizens' awareness of the importance of protecting centres of biodiversity, and joining in their activities;
 - Taking part in setting up associations for protecting and safeguarding centres of biodiversity, and joining in their activities;
 - Helping make schoolchildren, students, teachers and the staff in your institution aware of the importance of protecting centres of biodiversity.

Biodiversity in the Arab deserts

It seems at first glance that the Arab deserts are poor in biodiversity; but the truth is actually quite different. Species are in fact concentrated into very tiny, very specific areas, such as oases, oueds, coastlines, wetlands and mountainous areas.

The saharan species are unique and have a certain economic value much appreciated by the desert folk; they have a great ability to withstand heat and drought. As the centres of biodiversity in the desert are few, and frequently under threat, the disappearance of even one species constitutes a great loss. Because of this, all the Saharan species are considered as being of incalculable worth.

What is a nature park, and what is its role in protecting centres of biodiversity?

The nature parks (or nature reserves) are big protected areas, chosen on the basis of particular ecological features, in which live organisms (animal and plant species) which are of economic, social or ecological interest are isolated, to protect them from human or natural dangers and threats. No activities other than those that are ecological, educational or recreational - and within well-defined boundaries - are tolerated inside these reserves.

These reserves are managed according to norms which will ensure propitious conditions for protecting species, and will organise the interaction between the elements inside the reserve, and between the reserve and the outside world. Anyway, the reserve is designed to be a natural resource which contributes to sustainable development and, thus, requires permanent protection and rigorous management.

Choice of site for nature parks

Objective scientific guidelines must be respected when choosing sites for nature parks. They must be areas with a high density of species, and must contain a large number of species that are isolated, rare, endangered or dying out. The nature reserves must also offer suitable refuges; we must be in a position to protect their biodiversity for as long as is possible.

Sources: *Ghabour (Samir) and Betanouni (Kamel) in: Arab Scientific Review, published by ALESCO, Tunis, 1997, revised and adapted by Abdelkader Abou Faed, the Technical Centre for Environmental Protection, Tripoli, the Libyan Arab Jamahiriya.*

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