

IMPORTANCE OF HABITAT FOR CONSERVATION AND DEVELOPMENT OF WILDLIFE

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Summary

Destruction of vegetation in all parts of the country, starting from the coastal zone to the Alpine pastures has continued unabated since ages. The process has not only destabilized the fragile ecosystems but also has resulted in steep decrease in the wildlife population. As a matter of fact several species of flora and fauna are on the verge of extinction. All wildlife in Pakistan has to lean so heavily on assorted vegetation for shelter, food, survival and multiplication. The article brings into sharp focus the necessity of giving maximum attention to the protection of habitat to save whatever is left of the wildlife in Pakistan.

Introduction

Pakistan is a unique combination of deserts, illuvial plains, low hills and some of the highest mountain ranges in the world. The landscape is dotted with several natural and man made lakes. This has made Pakistan a country of many contrasts. The diversity of climate and soil is reflected in the distribution of flora and fauna.

Forests are the natural habitat of all wildlife. God almighty has blessed Pakistan with a large variety of trees, shrubs and grasses in different ecological zones. Starting with the mangroves in the coastal zone of Karachi, one comes across the xerophytic desert vegetation, the riverain forests, the irrigated plantations in the plains, the mountain scrub, the moist and dry temperate forests leading upto the alpine pastures. Such a wide range of vegetation should support a large number of birds, mammals, and reptiles for cover as well as food. However, over a period of time the country has been denuded of this green mantle very systematically. No doubt the scanty tree cover in the plains and the hills of the country is the result of gross ill treatment meted out to it in the past. Reduction in vegetation has slowly but surely been brought about due to successive waves of invasions by the Central Asians who also brought their flocks with them. Destruction of the forest cover has also been done by the local population which, afraid of the marauding armies sought refuge in the forests making heavy inroads for settling down. In the past, some remote green areas remained unmolested due to difficult approach. However, with the development of modern infra-structure and the ease with which a log now can be brought down from about 3,000 metres above sea level to the plains has further opened up the distant lands untouch by human hands. Even the pastures which cover about 60% of the total area of the country are getting depleted due to over grazing. Hundreds and thousands of goats, camel, sheep, cows, buffaloes, horses etc. are seen in these lands devouring the last blade of grass or even some poisonous shrubs depriving the wildlife population of its legitimate needs. This has not only seriously destabilized the natural ecosystems but also the destruction of vegetation has resulted in speedy disappearance of the valuable wildlife.

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Where all the wildlife has gone

Once upon a time, Pakistan was quite rich in wildlife. Its bird species alone number more than 900, twice that of Europe. When one goes into the status of wildlife in this part of the world one comes across numerous instances of abundance of birds, mammals and reptiles. During the Mughal period rhinoceros was found along the river Indus and Babar is reported to have come across it in the plains of the Punjab. Elephants roamed around in many places from where it has now completely vanished. Almost all the species of large mammals and birds are threatened with extinction. The deer in the Thal and Thar deserts, the urial in Soan valley and black partridges and hog deer along the banks of rivers in the Indus basin have been ruthlessly shot. Peacock is now surviving only around some villages in Tharparkar where its shooting is forbidden by religion of the local population. The wild goat, markhor, chakor may last for another decade or so. The green pigeon appears to have been exterminated. Chinkara and black buck once abounded Cholistan desert. The blue bull is now found only in small areas in Cholistan. Houbara bustard, a regular winter visitor to the Cholistan and Thal deserts appear to have changed his route due to excessive hunting pressure. The Great Indian Bustard is almost on the verge of extinction. The wild ass is already on the Red Data Book. In the Kirthar range, Sind Ibex, straight horned markhor, chakor, see see and gray partridges are now observed only in small number. The lizards and the snakes, once plentiful in the deserts, are being hunted out for skins. However, the wild boar is the only animal that has flourished due to immunity it enjoys in the Muslim society.

Apart from hunting and poaching, disturbance of natural habit is the major factor responsible for alarming reduction of wildlife in the country. New townships, the net work of roads, canals, railway lines, the hum, rattle and smoke of the machines in the areas where once peace and calm prevailed since ages have all contributed to the disappearance of wildlife in the countryside.

It is very well known that composition of wildlife changes gradually when food or shelter in the habitat is altered. For instances when wildlands are turned into agricultural fields the population of rabbits, snakes and other wildlife living in the burrows diminishes. Change of marsh like condition along streams reduces feed area for rails and water fowl. Similarly the deposition of wastes into streams results in an increase in bacteria which utilize the oxygen and destroy much of the food required by the fish. Many big game animals perish when highways and rail roads block the traditional movement routes. Dams prevent Saman from returning to their breeding grounds. Transmission lines when not properly placed interfere with the migratory birds. Examples are not uncommon when hooping cranes have died as a result of collision with such lines. In Pakistan population of starlings has declined as the mulberry trees the fruit of which they relish are disappearing from the plantations. The scientists have confirmed that alteration of habitat introduces stress situation in the wildlife which causes loss of body weight, lower reproductive activity and susceptibility to a variety of diseases. Introduction of winter sports like skiing, racing with snow mobile etc. have disturbed the reindeer and white tail deer population. Stress appears to cause chemical changes also. Air pollutants destroy vegetation, acidrain caused by the smoke damages vegetation, wildlife food and sometime even wildlife itself. Land and water habitat are definitely affected by the introduction of pesticides and herbicides.

The habitats and the state of associated wildlife

The *Himalayan moist temperate* region is being gradually but surely deprived of meagre wildlife it happens to have left with. The coniferous and broadleaved forests of Gallies, Lower Kaghan valley, Shogran, Nelum valley and Murree are on the decline and so is the associated wildlife. The stately deodar, fir, blue pine and oaks have been, debranched, decapitated and hacked to meet the insatiable human requirements of timber, fuel and fodder. The undergrowth of Berberis, wild roses, Indigofera, Fragaria etc which provided shelter and food is not there any more. Thousands of houses now dot the bared hills sides instead of the lush green forests. These wild and unsavoury acts of man have made the wildlife run away helter and skelter to be shot by trigger happy shikaris. No wonder the grey langur, rhesus monkey, black bear, panther and a variety of pheasants are not there any more.

The state of affairs is even more dismal in the *subtropical zone*. The tree crop has become very open due to incessant felling and heavy resin tapping. The entire zone has experienced a human and livestock population explosion. Being heavily burdened with rights of grazing, grass cutting and lopping there is neither a speck of under-growth nor there is any natural regeneration. Grey goral, Panther, civet, barking deer, chukor and pheasants have disappeared. A very brave attempt has been made to reintroduce the cheer pheasant and introduce the Korean pheasant. It is hoped to be a successful venture.

The *scrub forest* where phulai and wild olive are the principle species have borne the burnt of firewood and fodder requirements. The trees are so heavily lopped that they have a little chance of recovery. It is only the inherent capacity for survival against heavy odds that these trees are still there. This resource has dwindled under the pressure of the local populations. The useless and less nutritious species like *Dodonea viscosa* (sanatha) have invaded most of such areas. The next phase is the initiation of rill and subsequently gully erosion making recovery of vegetation almost impossible. Where should the wildlife go under such chaotic conditions. There is no cover and food in the forest and if they happen to stray out they never make it back. Naturally Punjab urial, Indian chinkara and leopard are on the verge of extinction. Black partridge, grey partridge, See See partridge, chakor etc. have become rare.

In the *Northern Areas* there has been ruthless cutting of trees. Most of the houses constructed in Islamabad and Rawalpindi and Peshawar owe their wooden structures to the deodar and blue pine timber obtained at dirt cheap rates. As if geological erosion was not enough, the man has further accelerated the process by removal of vegetal cover. There is hardly any natural regeneration to take the place of the trees removed from the site. Due to peculiar edaphic and climatic factors the requisite technology is not forthcoming to supplement it with artificial planting. Putting together all these factors deleterious to the habitat, no doubt the chakor, Western Tragopan, koklas pheasants, kaleej pheasant, monal pheasant and Himalayan black bear are on the wane. Markhor and the leopard are disappearing. In fact snow leopard is on the verge of extinction and so is the Morcopolo sheep. The way leopard or its cubs are treated when they travel to the urban areas by mistake or in search of food has been documented in the country's dailies. We never allow them to return to their abode or if capture them, feed unhygienic meat for their early disposal.

Juniper, chalthoza pine and blue pine are the major tree species of the dry temperate tract while Zarg, Makhi and wild ash compose the shrub vegetation. The prevailing adverse edaphic, climatic and socio-economic factors have greatly contributed to make this forest deficient province a tree less zone. The trees are slow growing and there is no young regeneration to take over when the older stalwarts fade away. Incessant grazing pressure has virtually reduced the vegetation to the point of no return. With the present state of the habitat one should not expect the Markhor, and Himalayan Ibex to survive or multiply. The pheasants and Chakor are also on their way out. Leopard and Wolves are a rarity and if they venture to make an appearance the graziers shoot them at site.

The deserts have been serving the grazing requirement of millions of domestic and nomadic livestock. Heavy browsing especially by goats and camel almost universal. In winter when the fodder is scarce, species such as *Prosopis cineraria* and *Acacia nilotica* are completely lopped and only stubs of the branches are left which sprout every year with depleted vigour. Wood for heating and cooking is so scarce that plants are dug out with their roots. Under such hostile biotic and climatic conditions it is hard to expect any natural vegetation to survive or recover.

The habitat has changed dramatically during the last 35 years. After construction of dams and reservoirs and layout of extensive canal systems, certain areas which were a natural abode of a variety of fauna have been turned into highly productive agriculture units. Alongwith agriculture have come the new settlements, carved out of once serene and stable wilderness. The trees and shrubs were uprooted in the process of levelling the sand dunes, thereby disturbing the natural tranquility, leading to a complete change in the environment.

In these denuded lands there is an ever increasing pressure on the desert wildlife. Sandgrouse, see see partridge, Houbara bustard are being hunted on a very large scale especially by the VIPs and foreign dignitaries. Other prized animals are chinkara and black buck. Desert cat, and the caracal and the fox are being killed for fur.

The Mangroves a unique forest in the Arabian See hugging the coast line in Sind and Baluchistan and covering an area of about 4 million hectares not only are the source of fuelwood and fodder but constitutes a natural refuge and breeding ground for a variety of aquatic life. This highly useful and productive natural resource is being systematically destroyed due to over exploitation. Siltation and reduction in the frequency in flushing with sweet water due to construction of dams on the river Indus has resulted in deterioration of this rare ecosystem. Out of the original eight tree species only a few like *Avicennia marina* have managed to survive. Naturally the fish and wildlife population is decreasing. Fishing cat, small Indian civit, smooth Indian otter, crocodile, tortoise, fish, prawn, shrimp, crab, oyster, mussels are waiting for a Messiah who could check the hands busy in destruction of their habitat.

The riverain forests with seasonal help from man in the form of reseedling when the areas are inundated due to flooding caused by monsoons and snow melt from the north, these forests have managed to perpetuate. However with the ever increasing demand for fuelwood, pit props and charcoal on one hand and difficulties being faced for natural and artificial

regeneration due to less frequent inundation, these forests have suffered a great deal. This natural habitat lining the rivers in the Punjab and Sind is a very welcome refuge for not only its own local fauna but also from the nearby wilderness areas due to multifarious development activities. Under the circumstances the night heron, red munia, black partridge, Jungle cat, hog deer, have made their exist. The present situation of occupation of these forests by the decoits and the compaign to flush them out would cause the wildlife suffer a lot.

Wetlands of Pakistan.

In the south-west Asia Pakistan happens to be one of the major wintering grounds for the wild fowl. Several natural lakes over a period of time have disappeared as a result of irrigation projects and drainage for providing more cultivable land for food production. The wetland habitat include lake, ponds, dhands, marshes, rivers and canals, These also include wet grass-land, cultivated fields and farmlands as well as open country. These natural and man made habitats support several endangered and rare resident species, and harbour heavy concentrations of migratory wild fowl population. They also provide wintering habitats to rare visitors like white headed ducks and geese. These wetlands include lake Zanginawar, Khushdil Khan band (Baluchistan), Ochali lake and Chashma barrage (Punhjab), Haleji lake and Khinjar lake (Sind).

An Indus river dolphin is unique as it is blind. It is found in Indus river and its tributaries. The construction or irrigation barrages have split up the dolphin population into isolated pockets. Drawing of river water for irrigation has drastically reduced available habitat for the dolphin in winter.

Crocodiles are an important component of the acquatic ecosystem. The number of crocodile has declined as many have been killed for their skin. They have lost their habitat due to land development activities resulting in vanishing of the scarce and scattered crocodile population. Now the crocodile are confined only to Nara canal adjoining lagoons and lakes in the district of Khairpur, Nawabshah and Sanghar in the province of Sind. Crocodile have also been sighted in Sibi, Lasbela and Mekran. It is imperative that natural habitat of crocodile is kept intact for their survival and growth. Like the crocodile, population of Gharial has also dwindled due to destruction of the habitat.

Save the habitat

It is not being realised that due to unthoughtful destruction of vegetation several trees and shrub species of the country have been listed as "endangered" and may be scored out of the flora of Pakistan. It is high time that decisive short and long term measures are taken to prevent further deterioration of the habitats in different ecological zones. If shooting and hunting goes on, some wildlife would still be left; if poaching netting and snaring continues, some species would manage to escape and survive; but if once the natural habitats are lost-Well; forget about wildlife.