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Management

5th Lecture

Management of Animal communities

Practice of wildlife management

Wildlife management in Pakistan is still in its infancy. Wildlife departments in the provinces are the custodians of wildlife. The management as accorded through taking wildlife measurements, analyzing the data for extensive or intensive management and following the principles of management data collection, however, are based on the information made available only recently. Management is accorded only considered important as game or because of their endangered status. Some control measures may also be adopted to control pest species. The Northern Mountainous Region of Pakistan has taken the lead in collecting and collating the data on wildlife species and their habitats with the help IUCN (the International Union for the Conservation of Nature) and (World Wide Fund for of Nature-Pakistan). The support of communities has recently been achieved the management of wildlife and their habitats.

Management accorded to species of interest

Management accorded to only a limited number of species that have mainly a value and their population status is known to a certain degree (Sheikh and Molur, 2005) Many other species reap the fruits of this management as associated species in a particular habitat. Species of interest or target species (for consumptive use) in the northern mountainous region are:

Ungulates

Marco polo's sheep (*Ovis ammon polii*), Shapu (*Ovis vignei vignei*). Flare- horned markhor (*Capra falconeri falconeri*). Himalayan ibex (*Capra ibex sibirica*). Blue sheep (*Pseudocapra nayaur*). Grey goral (*Naemorhedus goral*), Musk deer (*Moschus chrysogaster*), Barking deer Marco polo sheep. Shapo and Musk are critically endangered in Pakistan and hence they are protected their hunting is not allowed. These could be excellent largest species. for non-consumptive use. but this aspect has not been marketed The flare-horned markho is the prime target species for arranged hunting. The species is Endangered and considered to be a fine trophy Helping and motivating communities to conserve this sub species Markhor has played a very important role, The Markhor population. conserved by communities to a level that a certain number of large males (Trophy sized) can be removed without impacting the population. a fraction is allowed to be hunted. The Convention on Trade in Endangered Species of Wild Fauna and Flora (CITES) allows 12 Markhorto be hunted (The Government allows only foreign hunters to venture for this trophy' from community managed reserves in Pakistan.

Carnivores

Snow leopard (*Uncia uncia*), Common leopard (*Panthera pardus*), brown bear (*Ursus arctos*), Black bear (*U. thibetanus*), Indian wolf (*Canis lupus*), Himalayan lynx (*Felis lynx*). various Cats Leopard cat (*Prionailurus bengalensis*). Pallas' cat (*Felis manul*), or Palm civet (*Paguma larvata*), Eurasian or common otter (*Lutra lutra*). Foxes ladakh or Tibetan red fox (*Vulpes vulpes pusilla*) and Hill or kashmir fox (*V.v. griffithii*) and Jackal (*Canis aureus*). The Snow leopard is Critically Endangered whereas the Common leopard is Endangered though its population is Increasing in many areas. The Indian wolf, Lynx and wild cat populations have also decreased alarmingly. Because of their endangered status. ail carnivorous species are protected. As the natural prey populations are also decreasing, the carnivores. especially the Snow leopard, Common leopard and Indian wolf attack domestic livestock and are subject to retaliatory killing. Communities are now being educated to properly protect their livestock and capture the predator/s instead of killing them. and hand them over to the respective wildlife departments. In Baltistan areas, a livestock insurance scheme has also been started to help overcome the losses of livestock. All cats and otter are also illegally hunted for their fur. The wildlife departments have to be vigilant against such hunters and poachers. Foxes and jackals are considered to be pest species and are often subject to control measures. Foxes are also hunted for their fur, even though these are protected.

Pest species

Wild boar (*Sus scrofa*), Foxes, Jackal. Porcupine (*Hystrix indica*). Flying squirrels, Gant red or Indian flying squirrel (*Petaurists petawista*), Small Kashmir flying squirrel (*Hylopetes fimbriatus*) and Woolly squirrel (*Eupetaurus cinereus*): Cape hare (*Lepus capensis*). All pest species are subjected to control measures by individual farmers; no organized efforts are however made to control their populations, The Woolly flying squirrel is endemic to Pakistan and has recently been rediscovered to still exist. Cape hare is a favorite quarry and can be hunted legally.

Pheasants

Western tragopan (*Tragopan melanocephalus*), Himalayan monal (*Lophophorus impejanus*), White -crested kalij (*Lophura leucomelanos*), and Cheer (*Catreus wallichii*) pheasants. The population of all pheasants has been declining in the region, mainly due to illegal hunting both for their plumage and meat, hence they are all protected. Conservation measures taken have helped improve their populations. Cheer pheasant is considered to be extinct in Pakistan: only a small population has been reported from AJK. The largest single population of Western tragopan has been found in palas valley in Kohistan district of Khyber Pakhtunkhwa is considered to be the most beautiful of the pheasants.

Partridges

Chukar (*Alectoris chukar*), Himalian snowcock (*Tetraogallus himalayensis*). Snow partridge (*Lenva lerwa*), Grey francolin (*Francolinus pondicerianus*) and Common quail (*Coturnix coturnix*). Partridge populations are largely still intact, thanks to the breeding potential. Their hunting is allowed, subject to restrictions imposed VIZ., hunting seasons/days, bag limits, hunting methods, and hunting parties composition. Common quail are migratory. their hunting is again subject to season and bag limits; they can also be captured following some accepted norms.

Birds of prey

Golden eagle (*Aquila chrysaetos*), Eurasian hobby (*Falco subbuteo*). Common Kestrel (*Falco tinnunculus*). Merlin (*Falco columbarius*). Cherrug or Saker falcon (*Falco Peregrine* (*Falco peregrinus*)). and Vultures including Himalayan griffon (*Gyps himalayensis*), Lammergeyer (*Gypaetus barbatus*), and Egyptian (*Neophron percnopterus*). Cherrug and Peregrine falcons find a ready market with the Middle Eastern hunters who use these falcons to practice falconry' on the Houbara buslard. The Houbara Foundation arranges to release these birds after the falconry season is in breeding habitats hence their population is not adversely affected. No specific management is accorded to other birds of prey.

Migratory waterfowl

Grey leg goose (*Anser anser*). Bar-headed goose (*Anser indicus*), Mallard (*Anas platyrhynchos*), Northern pintail (*Anas indicus*). Eurasian wigeon, (*Anas penelope*). Gadwall (*Anas strepera*), northern shoveler (*Anas clypeata*). Common teal (*Anas crecca*), Ruddy Shelduck (*Tadorna ferruginea*), Ferruginous pochard (*Aythya nyroca*), Tuffed duck (*Aythya nyroca*), Coot (*Fulica atra*) and a variety of waders. Waterfowl, in general (included in Schedule 1 of Wildlife Acts), like partridges are allowed to be hunted through hunting license- Graylag goose. Bar-headed goose, Ruddy shelduck and Ferruginous pochard are Endangered and have a conservation value they are not allowed be hunted. Some waders are also allowed to be hunted (that have no conservation value and are included in Schedule of Wildlife Acts), subject to legal provisions. Pigeons and Doves and a wide variety of song birds are a great attraction for the visitors to the region. The population of these birds is monitored in some conservation areas.

Reptiles and amphibians

The ecological importance of reptiles and amphibians is completely ignored and they get the least attention as far as concerned for brown cobra (*Naja oxiana*), Vipers (*Echis carinatus*), Krait (*Bungaris caeruleus*), non-poisonous Colubers, different lizards and Agamas are not specifically managed. Snakes as a group are considered to be dangerous, whether they are poisonous or non-poisonous, and killed at sight is sometimes killed for its skin that is exported illegally. Frogs and toads are similarly ignored.