

Research report on Impact of Forest Fragmentation on the Biodiversity of Bannerghatta National Park, Bangalore Karnataka

Forest fragmentation is what happened when large contiguous patches of forests are split up into several patches. The remaining patches are separated by the “matrix” which is just anything other than nature forest and may include clear cuts or plantation forests. Habitats around the world, especially in the tropics, are being fragmented at a rapid rate, causing a tremendous loss of biodiversity. For example 12% of the approximately 10,000 bird species are threatened with extinction in next 100 years and 8% are near threatened. This loss of specie is likely to result in the collapse of significant ecosystem services to people such as pest control by insectivorous birds.

The Bannerghatta National park is of special significance owing to its proximity to the major cosmopolitan centre of Bangalore. This proximity imposes many pressures on the forest and also to the diversity of life that exists with in its boundaries. The forest department had listed 542 encroachments in the park which eats up more than 300 acres of prime forest land. The National park was formally started in the year 1971 which covers an area of 102.74 sq km, comprising 12 reserve forests. The forests of this national park are classified as

- Scrub type
- Southern tropical dry deciduous type
- Southern tropical mixed deciduous type.

To study living beings of the National Park line transect and variable distance lines transact sampling techniques were used.

Biodiversity of the Bannerghatta National Park

SI.No	Species	Approximate No
1	Plants	241
2	Amphibians	04
3	Reptiles	29
4	Birds	222
5	Mammals	26

The protected area falls in the border taluks like Anekal, Kankapura and pertly in the Bangalore South taluk. The inter state market is influencing protected area adversely.

There are roads passing through the National Park causing considerable disturbance and damage to flora and fauna.

Commercial activities within forested areas are known to bring in people from other areas with threats such as wild life poaching, illegal timber logging. The vegetation cover in the buffer zone is facing threat due to over use and abuse of the resources by the adjoining villages.

Some of the threats are

- Poaching
- Cattle grazing
- Fire hazard.
- Smuggling of timber and fire wood,
- Exotic weeds
- Stone quarrying and stone crushing around the park
- Wind mills,
- Encroachment.

Strategy to reduce the pressure of the park on the people due to wild animals activities (Man-Animal conflict)

- Building effective barriers viz: EPT, Rubble wall, Solar fencing, SSM wall at nala bund, spike gate etc, across the boundary.
- Organizing timely and well co-ordinated elephant driving camps.
- Realistic and prompt payment of compensation for damage to crop property and injury death o human being by the Protected Area Manager.

Strategy to improve the eco-system and bio-diversity in the impact and impacted zones:

- Water and soil conservation measures in and around the park – Gully plugging and construction of water harvesting structures.
- Eviction of encroached area – Planting with fast growing fodder tress.
- Eradication of invasive weeds.
- Maintenance of Fire line.

Strategy to improve the socio -economic conditions of the affected people:

- Encouragement for horticulture, agriculture, apiculture, pisci-culture and mushroom cultivation activities – Provision of supply of seeds/ implements/ training.
- Cottage industry – Incentives to encourage cottage industries.
- Income generating employment – Entrusting developmental works to the Eco – development communities for execution.