

# **Impact of Unorganized Development on Environment and Biodiversity of Jammu and Kashmir**

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## **ABSTRACT**

*Jammu and Kashmir also known as "Paradise on Earth" Possess its rich flora and fauna, wild biodiversity, snow clad mountains and scenic sports which attracts tourists from entire world. Removal of article 370 from state also added flow of people from other states of India for tourism as well as business, agriculture and agriculture based industries, education, research, jobs which may leads to unplanned urbanization and unplanned development of this state. Overpopulation due to different opportunities and unplanned development may costs high in terms of environmental and biodiversity destruction. This article is an effort to study future impacts of human activities on environmental entities such as rising stress on natural assets, grazing pressure and threats to existing protected areas, land transformation, degradation and erosion of soil, agriculture shifts and use of synthetic fertilizers and pesticides, production of waste and pollution, change in climate, damage of natural habitation and loss of species and genetic diversity leading to loss of important biodiversity from different ecosystems. The study also gives important recommendation for future sustainable development and to reduce adverse impact on environment.*

*Keywords: Environmental impact, loss of biodiversity, unorganized development, pollution, over population.*

## **INTRODUCTION**

Unique climatic condition and location of J&K contributes to its highly diverse flora and fauna. Rich diversity of plants support fuel, fiber, food, medicine, needs of people and food and fodder needs of wild and domestic animals. Flora of Himalayan Kashmir consist about 3,054 species and about 880 species are available in Ladakh and 506 species are found in the Jammu district these figures includes only angiosperms, gymnosperms and pteridophytes. Micro flora that is bryophytes, fungi and algae also present in diverse form.

The biodiversity loaded area of Kashmir happens to be one of the 26 hotspots in India where there are high rates of deforestation and endemism (Khoshoo, 1991). The whole Himalayan belt with 8 critical areas is one hotspot mega centre. This biodiversity not only hold individual life but also creates different opportunities to utilize them in different ways. Unplanned, Unmanaged and uncontrolled utilization of this biodiversity and environment for further economic development is key cause of depletion of environment and biodiversity. It also put vast stress of demands on the area and causes increasing pressure or stress on natural resources (both biotic and abiotic), decrease in forest area, pollution of water sources, transformation of land, degradation and erosion of soil, climatic changes and over exploitation of resources, etc.,

## **RESEARCH METHODOLOGY**

The basis of this study is secondary information collected from websites, journals, newspapers, books, economic survey of Kashmir and Jammu and other online sources. This research is analytical and descriptive in nature.

## **I) FINDING AND DISCUSSION**

a) Impact on Environment: Increasing population and human flow from outside state has led to environmental problems. In case of J&K, during economic growth, unorganized industrial development, agricultural development and tourism adversely affected natural resources and environment. For fulfillment of food needs natural resources are get extensively utilized. For accommodation of large number of

population unplanned urbanization or construction of houses, hotels, lodges are rapidly increasing which led to land transformation, decrease in forest area, removal of natural habitat of different flora and fauna. Another affecting factor is waste generation from residential, industrial and other way is directly released in nature leads to air, water and land pollution and serious threat (which is cause of environmental toxicology) to biodiversity of state.

Construction of roads, airport and railways, industrial infrastructure and houseboats, for agricultural practices, for source of oxygen, wood and food increases forest destruction and removal of green cover. According to estimate of forest department in 2010, within past couple of decade approximately 14000 hecters of forest land has been sacrificed including 9496 hecters in Jammu region and 4877 hecters in Kashmir valley. As far as J&K is concerned the state does not have more than 20% of forest area which is not enough to solve problems like increasing CO<sub>2</sub> concentration soil erosion, climatic changes and environment imbalance.

Land transformation is another development related issue where natural land ecological habitat are get transformed or used for different purposes like agricultural practices, development of tourism destination and recreational activities like mining causes degradation nature and loss of different ecosystems.

Anthropogenic emission of CO<sub>2</sub>, SO<sub>2</sub>, greenhouse gases and CFC(responsible for ozone depletion) are responsible for climatic change as a result of this natural crises like snow fall imbalance, changing rain fall pattern, floods storms, fire etc., invites loss of different species of microbes, animals and plants as well as different abiotic factors which support life.

b) Impact on Biodiversity: Living organisms are inseparable and directly affecting component of environment which interacts with abiotic factors within their environment. All needs like recreational, emotional, spiritual and aesthetic of human are satisfied by the biodiversity of nature. Modern agricultural practices including use of chemical pesticides and fertilizers contaminate water, air, soil and disturb microbial biodiversity.

Global warming, climatic changes, natural catastrophes, demographic uncertainty, environmental uncertainty and genetic uncertainty are responsible for loss of biodiversity. Alternation or loss of habitat due to transformation of natural areas, introduction of foreign or new species or genetically modified species lead to imbalance of ecological equilibrium, over exploitation of particular species as resource is sure way of loss of biodiversity from state. In case of J&K state different flora and fauna are in threatened condition.

### **Endangered Species of Animals**

<b>S.No.</b>	<b>Species</b>	<b>Region</b>	<b>Status as per IUCN's</b>
1)	Snow Leopard	Ladakh, Kashmir and Jammu	Endangered
2)	Common Leopard	Jammu, Kashmir and Ladakh	Endangered
3)	Brown Bear	Ladakh, Kashmir and Jammu	Endangered
4)	Ibex	Ladakh, Kashmir and Jammu	Endangered
5)	Himalayan Tahr	Jammu	Endangered
6)	Markhor	Kashmir and Jammu	Critically Endangered
7)	Serow	Kashmir and Ladakh	Endangered
8)	Hangul	Kashmir	Critically Endangered
9)	Musk Deer	Jammu, Kashmir and Ladakh	Endangered
10)	Tibetan gazelle	Ladakh	Endangered
11)	Chiru	Ladakh	Critically Endangered

**Endangered species of Birds**

<b>Black Necked Crane</b>	<b>Ladakh</b>
Himalayan Golden Eagle	Kashmir, Ladakh & Jammu
Cheer Pheasant	Kashmir & Jammu
Bearded Vulture	Jammu
The Koklass	Jammu & Kashmir
The Western Tragopan	Ladakh
Brahmin Shelduck	Ladakh
Great Bitten	Ladakh
Eurasian Wigeon	Ladakh
Snowcock Wigeon	Ladakh

**Endangered species of Flora as per IUCN category**

<b>S.NO</b>	<b>Species</b>	<b>Category</b>
1)	<i>Aconitum chasmanthum</i>	Critically Endangered
2)	<i>Aconitum heterophyllum</i>	Critically Endangered
3)	<i>Aconitum kashmiricum</i>	Critically Endangered
4)	<i>Amelia benthamii</i>	Critically Endangered
5)	<i>Fritillaria roylei</i>	Endangered
6)	<i>Gentiana kurroo</i>	Critically Endangered
7)	<i>Taxus wallichiana</i>	Endangered
8)	<i>Jurina dolomiaca</i>	Endangered
9)	<i>Ephedra geradiana</i>	Endangered

**C) SUGGESTIONS**

So the above discussion proves that the unmanaged and uncontrolled growth and development is very harmful for the natural environment of the state. To keep away from its harmful effects there is need of planned and managed development and urbanization in a way that is nature sustainable, economically and socially beneficial.

- i) Increase awareness about environment and environment studies made compulsory.
- ii) Government or governing bodies should provide policies, guidelines, rules and regulations concern with environment sustainability which will prevent deterioration of ecology of state.
- iii) Assessment of impact on environment should be done compulsory for all kinds of projects or industries so as to know future impact of those on nature and to take precautionary steps.
- iv) Effective waste management should be done so as to reduce pollution.
- v) Follow Reduce-Reuse-Recycle
- vi) Promote organic farming so as to reduce degradation of different factors of environment.
- vii) Characterization, Inventorying and Monitoring of biodiversity should be done periodically so as to prevent loss of biodiversity.

**CONCLUSION**

If we want to save paradise on earth that is J&K in its uniqueness and richness; we must plan managed and controlled development of state with measure to correct current situation and avoiding future degradation of nature. The study also revealed that there is direct relationship between human actions and environmental degradation and biodiversity loss. It also showed that any unmanaged and uncontrolled development leads to

degradation of ecological resources, environmental disturbance or imbalance and many serious problems which eventually increases unhealthy environment for survival. Thus it is concluded with some recommendations which will assist to make our environment, natural resources and biodiversity more sustainable and beautiful. These suggestions will not end these problems but it will help to sustainability and conservation of environment as well as biodiversity.

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