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Impact of eco system on floral diversity with special reference to Angod village, Uttar Kannada district: Role of stake holders in bio diversity conservation

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Abstract

This paper focuses on the impact of eco system on the floral diversity of Angod village of Uttara Kannada District and highlights the role of stake holders in bio diversity conservation. Conservation efforts are vital to protect the unique biodiversity of Uttara Kannada's forests. As the district is home to several protected areas and wildlife sanctuaries, including the Kali Tiger Reserve and Anshi National Park, aimed at preserving its natural heritage, the role of stake holders becomes more acute and crucial. Conservation efforts are crucial to mitigate these threats and preserve the rich flora of the Western Ghats. The studies suggest that floristic study in this region needs a thorough revision and deliberation, as over the years there are changes in floristic components. Identifying the right balance of stake holders is a critical step in bio diversity conservation.

Keywords: Angod village, floral diversity, impact of eco system, conservation strategies, role of stake holders

Introduction

The 'Angod' is the part of Western Ghat belongs to the district Uttara Kannada of Karnataka state, is known for its diverse and rich forest types. They are home to a wide variety of tree species, including teak, rosewood, and agar wood. The evergreen and semi-evergreen forests in the region contribute significantly to its natural biodiversity. These forests are home to a variety of tree species like Indian rosewood (*Dalbergia latifolia*), Anjan (*Hardwickia binata*), and the flame of the forest (*Butea monosperma*). Along with these forest types, Bamboo forests, Mangrove forests and grass lands are common feature of the Western Ghat. The forests of Uttara Kannada are known for their high levels of endemism, meaning they are home to plant and animal species which are unique in the world. Additionally, these forests provide habitat for several threatened and rare species including the critically endangered Lion-tailed macaque and various species of hornbills. As per the local research studies more than 1500 flowering plants are reported in the Uttara Kannada district from the selected spots. It also gives clear image of vast diversity of plants in the study area and associated faunal diversity.

This study has the information about wild plants, plants with medicinal value, ornamental plants, and edible fruits. The report also covered some of the endemic, exotic, and naturalized species of plants. Some families are dominant with maximum number of species in this area. The representations of dominant families covered in this report are.

1. Acanthaceae.
2. Apocynaceae.
3. Asteraceae.
4. Euphorbiaceae.
5. Leguminosae.
6. Malvaceae.
7. Orchidaceae.
8. Rubiaceae.
9. Verbenaceae.
10. Zingiberaceae.

Like many ecologically sensitive regions, the Angod parts of Western Ghats face threats such as.

1. Agricultural Expansion.
2. Anthropogenic Activities.
3. Climate Change.
4. Deforestation.
5. Habitat Loss.
6. Urbanization.

Conservation efforts

The research studies suggest that floristic study in this region needs a thorough revision and more concentration, as over the years there are changes in floristic components. Conservation efforts are vital to protect the unique biodiversity of Uttara Kannada's forests. As the district is home to several protected areas and wildlife sanctuaries, including the Kali Tiger Reserve and Anshi National Park, aimed at preserving its natural heritage, the role of stake holders becomes more acute and crucial.

The Remedies for Preventing the Impact

1. **Closing research gaps:** Closing the research gaps at both local and state level to tackle the challenges of climate change in the agriculture is required in accordance with the recent climate variability in Karnataka as well as the at least IPCC report show casing dangerous impact of climate change in South Asia.
2. **Promoting Information exchange:** Promoting exchange of local scientific information and traditional knowledge to inform the farmers about suitable cropping patterns as per the changing climatic conditions while taking into account farmers perceptions and cognition processes.
3. **Mainstreaming action points:** Mainstreaming action points of the state climate action plan into major initiatives of the departments has the potential to make an impactful difference especially in context to the speedy implementation of the KSAPCC.
4. **Setting up Platforms for better co-ordination:** Platforms for better co-ordination between the centre and the state government on climate change plans and policies needs to be developed to promote cross sharing of knowledge and implementation challenges.

Bio Diversity related Conservation Issues

Forest loss, habitat fragmentation, habitat degradation by invasive plant species, encroachment and conversion also continue to affect the Western Ghats. Fragmentation caused by development pressure in the Western Ghats is shrinking the availability of wildlife corridors and suitable habitats outside protected areas.

Slow down on Committee Recommendations

Gadgil committee which was set up in 2011 recommended that all Western Ghats be declared as the ecological sensitive areas with very limited development allowed. Kasturi Rangan committee which was set up in 2013 sought to balance the development and environment protection in contrast to the system Gadgil committee. It recommended complete ban of quarrying and sand mining in this sensitive area. Central Government has kept the recommendations at bay since 2011. Since the Kasturi Rangan Committee four draft notifications have been issued but without any use.

Central government extended the dead line till June 2022 to notify the 2018 Draft of Western Ghats Ecological Sensitive area (ESA) notification. Hence, there is an administrative slowdown.

Role of Stake holders: Identifying the right balance of stake holders is a critical step in bio diversity conservation. Stake holders can join hands with the administration in creating awareness and in

Addressing conservation challenges - the role of stake holders

1. Stake holders need first-hand information and awareness on efficient utilization of natural resources of Western Ghats
2. Stake holders need to involve in strict monitoring on the working of laws on deforestation and preventions of deforestation in this Angod village jurisdiction.
3. Stake holders can provide information to Government authorities and forest dept officials about poaching and killing of wild animals when they comes across such instances or provide where about about the notorious groups involved in poaching activities.
4. Creating public awareness about conservation of bio diversity and its importance in bio diversity conservation and survival of Western Ghats needs to be highlighted in community meetings.
5. Stake holders can develop community groups to promote cross sharing of bio diversity conservation knowledge
6. Stake holders can involve in decision making process, policy implementation and challenge Redressal mechanism. They can voice their opinion in Panchayat meeting state assembly and in Parliament.

Stakeholders need to conduct regular community meetings, join hands with local Grama Panchayat and Women self-help groups. The need to conserve the bio diversity of the region not only is the sole responsibility of the government but all people should take the responsibility of sensitizing.

1. Essential life sustaining conditions like climate, food availability, and veterinary care can be altered and are under human control. Stake holders can create awareness about right use of natural resources.
2. Artificial breeding methods can be introduced leading to successful breeding and creating many more offspring of the species.
3. The species can be protected from poaching and poacher activities active in the area.
4. Flora and fauna management can be efficiently done if all stake holders understand the key concepts of breeding activity of the animals, Gene techniques applied to increase the population of the species, and such conservation science knowledge which becomes handy tool in conservation.

Conclusion

Thus, stake holders have a key role to play in conserving the bio diversity. The role of the stake holders becomes all very important and crucial because Angod village is not the sole area affected by bio diversity conservation challenges but the whole Western Ghats is under threat of extinction. A wider involvement from the community level will assist in

better monitoring and implementation challenges faced in bio diversity conservation.

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