

FIELD PROJECT
on
ROLE OF ECOTOURISM IN
BIODIVERSITY CONSERVATION

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INTRODUCTION

Biodiversity is the variety of life, in all of its many manifestations encompassing all forms, (plants, animals and microorganisms) and at all levels of biological organization which includes genetic diversity, species diversity and ecosystem diversity (Christ et al., 2003; Gaston and Spicer, 2004; Meduna et al., 2009; CBD, 2012). The earth's biodiversity constitutes valuable natural resources in economic, cultural, aesthetic, scientific and educational terms, providing enormous amounts of both monetary and non-monetary benefits to humankind.

Generally speaking, the tourism sector plays a vital role in any country for the economic development. Tourism has many types based on their purpose and characters. Ecotourism is a type and it has some basic principles such as minimally impacting on the environment, learning about and respecting the local culture and environment, obtaining positive experiences for all, employing and benefitting local people, learning about the local political, social and environmental issues, ensuring that your spending contributes to the conservation of the area, assisting in preserving a special habitat such as wildlife, farming, nature, water etc., earning and taking back new ideas back to influence your own environment, obtaining new unmatched experiences and helping to benefit the world. At present, the concept of ecotourism plays a pivotal role to conserve the biodiversity. Waste from tourists and indiscriminate disposal of waste cause the environmental challenges particularly the biodiversity destruction. The knowledge of the ecotourism should be understood by the various stakeholders to implement the concept in practice. Without the proper knowledge about the ecotourism, it is impossible to implement and get the favourable outcomes.

ECOTOURISM – GLOBAL SCENARIO

Ecotourism is defined as responsible travel to natural areas that conserves the environment and improves the well-being of local people. Ecotourism has been considered as the impetus and economic investment for management of natural resources. Another important aspect of ecotourism is the encouragement of active participation by the local population in the conservation and education dimensions. Currently, ecotourism is becoming the fastest growing segment of tourism. Ecotourism first grew out of the global environmental movement in the late 1970s. While the development and growth of ecotourism took various paths in different parts of the world, by the early 1990s, ecotourism, along with nature-based, cultural, heritage and adventure tourism, had become among the fastest growing sectors of the tourism industry worldwide.

BIODIVERSITY

The term “biodiversity” refers to the variety of living organisms. Biodiversity brings together the different species and forms of life (animal, plant, entomological and other) and their variability, that is to say, their dynamics of evolution in their ecosystems.

Biodiversity in danger: the impact of human activities on biodiversity loss

It was in the late 1980s that the concept of biodiversity became a major concern. This attention followed the increasingly obvious recognition of how human activities had been responsible for the degradation, fragmentation, and destruction of ecosystems and their biodiversity. Indeed, humans have been contributing to the disappearance of 60% of the world species since 1970. Not only because of our industrial, economic or urban activities but also because of how they all together contribute to climate change and its extreme events.

Biodiversity loss: what are the consequences?

The gradual decline in biodiversity has many consequences for humankind. For example, the disappearance of certain pollinating insects such as butterflies or bees makes some agricultural productions more complicated. For instance, bees are very important pollinators of food crops and without them, the spread of biodiversity losses reach. The disappearance of some species can disrupt ecosystems and make them more fragile.

BIODIVERSITY CONSERVATION THROUGH ECOTOURISM

Common approaches to protecting biodiversity include creation of parks and protected areas, establishment of natural reserves, and implementation of integrated conservation and development projects (ICDP), Establishment of Butterfly Parks, Sparrow Parks, Vulture safe zones, Vulture Restaurants etc. They vary in strictness of conservation in terms of human consumptive uses.

PROTECTED AREAS

Protected areas (PAs) play critical roles in safeguarding biodiversity and maintaining the crucial services provided by the natural systems. They have an important role in the evolving challenge of maintaining a sustainable world. PAs have long been the only way to conserve ecological regions from the other forms of land. These areas are therefore the cornerstone of most national strategies to protect Biodiversity and Natural resources playing a key role in the sustainable utilization and attainment of natural resources.

ZOO'S ROLE IN CONSERVATION

A zoo is a collection of wild animals in captivity and may include 'zoological gardens, biological parks, safari parks, public aquariums, bird parks, reptile parks, insectariums, and other collections of wildlife primarily for public exhibition, education, scientific, and conservation purposes. The mission of the World Association of Zoos and Aquariums, an international organization of zoos and aquariums, is to 'set standards for increasing achievement of conservation' among zoos worldwide. Integrated conservation consists of ex situ breeding of threatened species, public education, training and research, and support for in situ conservation of species.

NATIONAL PARKS AND SANCTUARIES

National Parks provide ample opportunities to the visitors to have a close encounter with the wilds. Some of the best jewels of Indian wilderness include the Great Himalayan National Park, Dachigam National Park near Srinagar etc. India has 515 animal sanctuaries referred to as wildlife sanctuaries category IV protected areas. Among these, the 48 tiger reserves are governed by Project Tiger, and are of special significance in the conservation of the tiger. Wildlife sanctuaries in India are as a desired Eco-system for rich wildlife and natural habitats.

BUTTERFLY PARKS

Bannerghatta National Park, near Bangalore, Karnataka, was founded in 1971 and declared as a national park in 1974. It is a popular tourist destination with a zoo, a pet corner, an animal rescue centre, a butterfly enclosure, an aquarium, a snake house and a safari park. It is a humid tropical climate, with an artificial waterfall and appropriate flora to attract butterflies. The conservatory leads to a second and third dome, which house a museum containing dioramas and exhibits of carefully preserved butterflies. The prime objective of this project viz., setting up of an insectariums and butterfly house to facilitate education of the public on the significance of nature conservation.



VULTURE SAFE ZONES

Vultures are a critical part of the food chain because they maintain a balanced ecosystem and prevent the unnecessary spread of disease. The dramatic decline of the Indian vulture population is directly linked to animal husbandry practices. With this in mind, the concept of creating a, “Vulture Safe Zone” has been emerged. The Vulture Safe Zone area falls in the Bundelkhand geographic region of Madhya Pradesh, India. Expected outcomes of this program include the reintroduction of vultures into the wild from captive breeding centres and the expansion of areas designated as Vulture Safe Zones.



VULTURE RESTAURANT

A vulture restaurant is an undisturbed area where non-toxic, poison-free meat and carcasses are provided for vultures and other scavengers. In Namibia, the first vulture restaurant was established in 1987 in the Waterberg Plateau Park. The aim was to provide a regular, uncontaminated food source for the Waterberg's declining population of Cape Vultures, a globally threatened species



SPARROW PARKS

The House Sparrow is closely associated with human habitation and cultivation throughout the world from historic time. The Sparrow is a human habitat companion. After concerning about the threats posed by House Sparrow and about their role in our ecosystem, various types of conservational measures are opted and in this, various types of artificial nests are also introduced. These artificial nests can easily be installed on houses for sparrows. Sparrow Parks can thus make a perfect place for tourists where they can enjoy the sighting of House Sparrow in their natural habitat and help in their conservation.



PALM-TREE BARN OWL PARK

The Barn owl is a cavity nester found throughout most of the World except Antarctica. Due to lack of suitable nest cavities, barn owls often nest in a variety of unsuitable places. These places include crevices between hay bales, air vents, window ledges, and open stairways. As a very opportunistic species, Barn owls will nest in unsuitable sites that offer promise, but end up with limited nesting success such as palm

tree nests. Artificial nest box is put upon Palm Tree in an area and that area considered as palm tree Barn owl Park. Nest boxes will create more and better nesting sites, increasing the reproductive success of local owls, as well as helping to keep the nest sites unacceptable.



AMPHIBIAN HUSBANDRY

Amphibians comprise a group of vertebrates that display an enormous diversity of natural histories. Within the three orders, anurans (frogs and toads), salamanders, and caecilians, there are more than 6,900 species with potentially many hundreds more awaiting discovery and description. There are many reasons to keep amphibians in captivity including for purposes of exhibition, education, conservation, preservation, and for hobby and personal interests. Historically, zoos have included amphibians within their herpetology programs and displays; however, as they become more conservation-oriented, zoos will have to alter their collections to reflect their resources and capacities to carry out this work.

FISH AQUARIUMS & AQUACULTURE

An Aquarium is a transparent tank or a bowl or an artificial pool where live fishes and other aquatic animals are kept. Aquaculture includes fish farming in both fresh and saltwater. The term mariculture is often used for aquaculture that occurs in brackish and saltwater. Aquaculture products are grown in ponds on land or along the coast, and in the ocean in pens and cages or on lines.



TURTLE BASED ECOTOURISM

The Queensland state government began the process of creating Mon Repos Conservation Park for the conservation of sea turtles in 1981. It offers a unique opportunity for visitors to catch a glimpse of a turtle's world. Tourist operations are combined with collection of data about turtles which is used for scientific purposes.

REPTILE REHABILITATION & RESEARCH CENTRE

There are various organizations, NGO's and conservational societies are working for their conservation like in India Kukrail breeding centre, Katarniaghat crocodile breeding centre, Kane crocodile sanctuary etc. and international reptile conservation foundation, Wildlife SOS and Reptile conservation international etc. are few international associations working for their conservation. For turtles, conservation programs are being ran by organizations and breeding centres are established in different cities for providing the breeding space to lay eggs, especially to fresh water turtles, red-crowned roof turtle, spotted pond turtles etc.



SNAKE PARK

There are 270 species of snakes in India out of which about 60 are highly venomous. The King Cobra found in India is one of the most beautiful snakes and the largest venomous snake in the world. The big four member of highly toxic snakes in India are Nag “Indian cobra”, krait, Russell's viper and Saw-scaled viper. Snake Park in Badu Kolkata and Nehru Zoological Park Hyderabad also refer as snake parks for conservation and educational purposes.



WETLANDS ECOTOURISM

Bird watching has become a particularly important form of ecotourism and one that is particularly common for wetlands. Ecotourism can educate landowners and businesses with regard to the functions and values of wetlands. It can provide landowners, local governments, and local businesses with economic and cultural incentives for conservation of wetlands and other resources. Wetland-related facilities can, if properly sited and designed, both meet the needs of ecotourists while protecting resources. They also include interpretive centres, picnic facilities, parking lots, and food and lodging facilities on adjacent lands if properly sited and constructed. Even limited wetland-related facilities may play an important part in meeting regional needs.



CONCLUSION

Ecotourism has become an important economic activity in natural areas around the world. It provides opportunities for visitors to experience powerful manifestations of nature and culture, and to learn about the importance of biodiversity conservation and local cultures. Promoting community-based enterprises that benefit the local communities, including carrying capacity of ecotourism sites are also important aspects that should be looked into future. In effect, science-based management of ecotourism and biodiversity conservation would make sound decision-making. Investing in research makes good business sense since the information generated in such activities pay off in customer satisfaction, value of the final tourist product, long-term economic sustainability, and appeal to mass media.

Ecotourism also generates income for conservation and economic benefits for communities living in rural and remote areas. Economic activity is one of the major drivers of biodiversity loss; Successful ecotourism requires maximizing its environmental and economic benefits while minimizing ecological damage. But unfortunately, all the eco - tourism projects are not completely successful in attaining their objectives. Environmental deterioration and inequitable development, many a times has been found as ill impacts of eco- tourism.