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## Needs and methods to biodiversity conservation in South-East region of Rajasthan

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### Abstract

Biodiversity is the variability of flora and fauna types in the world. The variety depends on genetic, ecosystem and species. It mainly fall-under environmental conditions as climate of the region so the biodiversity is not spread equally on the earth. Human being is the milestone of biodiversity. In the study area various types of plants like teak, sal, neem, mango etc, and animals like tiger, lion, elephant, deer, etc are found. There are wild life sanctuaries, national park also consist. In the Chambal river crocodile conservation is also present. At present, Climate change is becoming a big environmental issue. Because of population explosion, the pressure on natural resources is continuously increasing. Deforestation is the result of converting forest area in to human residence and cutting forests for timber, fuel wood and others. The region is facing alarming condition of climate process as unpredictability in temperature, rainfall, air pressure etc. many species of plants and animals are losing their native residences and some others are in imperil position. So it is very necessary to find out and apply the method of biodiversity conservation at broad level.

**Keywords:** biodiversity, environmental conditions, deforestation, flora, fauna

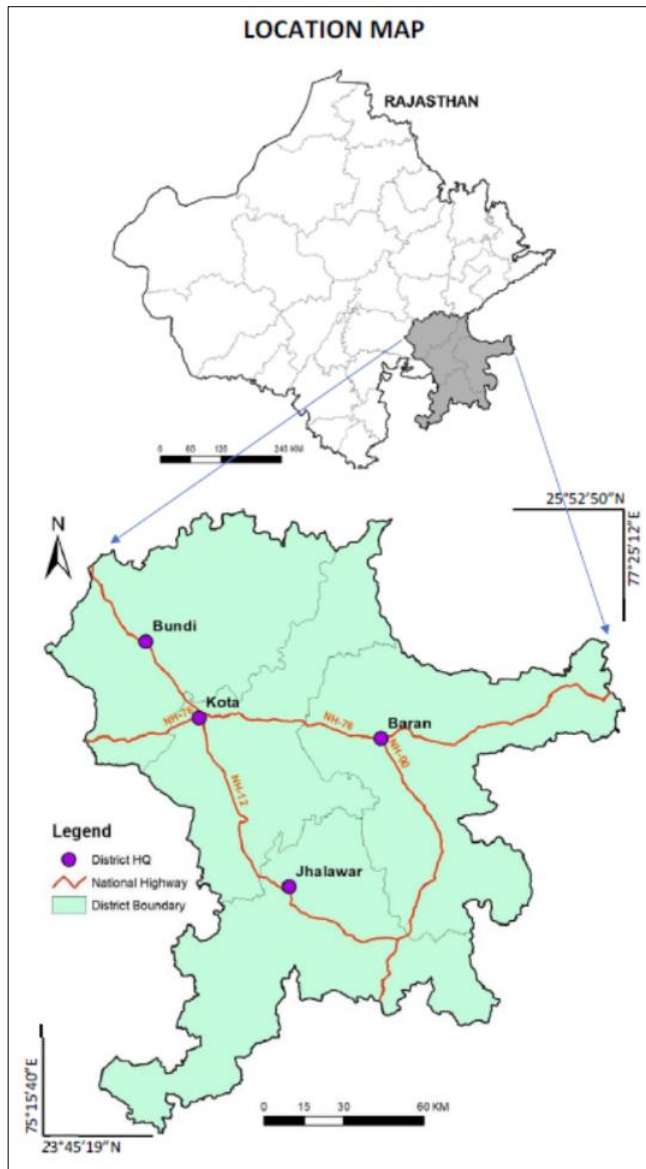
### Introduction

In the solar system life is present only on the Earth planet. Where forms of the life starts from single-celled creature called unicellular to many trillion-celled organism called multi-cellular. The biodiversity receives the energy from the Sun. Oxygen, carbon dioxide, water, food and other things are necessary for the parts of biodiversity. There are locate many types of ecosystems as forest ecosystem, river ecosystem, Lake Ecosystem and others. Where lives various types of plants and animals. At present, the speed of climate change is very fast. The cardinal reason of climate change is imbalance of incoming and outgoing radiation in the atmosphere. Human being is promoting new techniques by exploiting our natural resources, so that releasing of greenhouse gases has increased. Change in climate is determined as a dangerous threat to the biodiversity. The study area is also facing these problems. Many species of flora and fauna are at hazardous spot and it is frighten phase for human being. So it becomes very mandatory to conserve the biodiversity.

### Study Area

South east Rajasthan lies between 75°15'40" East to 77°25'12" East Longitudes and 23°45'19" North to 25°52'50" North Latitudes. The study area is also known as Hadoti region. It contains four districts as Kota, Baran, Bundi and Jhalawar. Gujarat and Madhya Pradesh states are the neighbouring states of this region. The area of this region is 9.6% of the state. This area is the most populated and rich with natural resources. The mainly portion of Hadoti region is shaped by plateau. The soil is alluvial and very fertile. Chambal, shipra, parbati, retam, kalisindh, and parwan are chief waterway of the area. Rice, maize, soybean, wheat and linseed are the dominant crops. This region is prosperous with the forest area. Animals like tiger, panther, hyena and others are private in reserved areas. Because of Hada rajputs a sept of Chauhan dynasty, this region got its name as Hadoti region.

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### Objectives

1. To study about the needs of biodiversity conservation in the study area.
2. To find out the reasons of decreasing biodiversity.
3. To suggest methods for conserving of biodiversity in the study area

### Hypothesis

The methods for biodiversity conservation are protecting the endangered species in the South East Rajasthan.

### Methodology

Methodology in this paper is expounded as the systematic method to sort out the research problem. From many sources data have been collected, by using various techniques, delivering an exposition of data gathered and drawing conclusions about the research data. Primary data have been collected from survey. Secondary data collected from various departments, reports, books and research works.

### Threats to the Biodiversity

Biodiversity is the biological heterogeneity that contains various species on the earth. Biodiversity comprises different plants, animals, their genes and ecosystems. The natural diversity is very necessary to healthy environment

that maintain human being well in many dimensions. Biodiversity gives fundamental things as fresh air, water, food products and others as timber, fiber etc. It helps human being in cultural, social and spiritual parts of life. Climate changing, population explosion, over use of natural resources and other reasons are creating danger to biodiversity.

### Leading threats to biodiversity are

1. Environment degradation, fission and loss of habitat
2. Dispersion of invasive species.
3. Unsustainable use of natural resources
4. Climate change
5. Unsuitable fire system
6. Changes within water flows

### Need to Conserve Biodiversity

We should conserve biodiversity on account of their assistance to living on earth. It gives biological benefits, ecosystem benefits, social and spiritual benefits.

#### 1. Biological Benefits

A biological resource is that which we get from nature. There are many products like food, wood, medicine, fibers etc. Human being is dependent on plants as they give oxygen to breathe and various things to eat. Many plants are being used as medicine for example the cinchona tree gives quinine that is used in malaria treatment. Many fibers are the product of plants which are used in making clothes, ropes etc. Many plants are being used in houses and various furniture products making. Like this, there are uncountable uses of plants are there.

#### 2. Social and Spiritual Benefits

In the history of human, conserving indicates protecting of the nature for the spiritual health. It gives the protecting blest places in the local area. The biodiversity effects the cultural development that can be shown by heterogeneity of the local mythology, folk dances and folk art. In different areas there are distinct cultures. They have influenced our language, diet, occupation and various types of activity. Individuality of each habitat is presented by animals and plants. That's why every country and state have their flagship animals as well as plants. When we travel for motivation from the nature than we see the biological diversity, different cultures and places. In the study region our main vision is that to view, support and sustain the local cultures and its natural ecosystem. Support though suggestions can be very helpful to reduce habitat destruction as well as to preserve endangered species.

#### 3. Ecosystem Benefits

Biodiversity of an area is a part of that area's ecosystem because biodiversity is only diversity of flora and fauna but ecosystem contains flora and fauna with water, temperature, air, soil and others. Ecosystem supports the human being with natural resources. There are many ecosystems in the study area like forest ecosystem, river ecosystem, agriculture ecosystem, pond ecosystem and others. In the ecosystem energy flows from one to another level by food chain. Ecosystem tries to control environment degradation. It is helpful in decomposition of wastes, water purification, renewal of soil fertility and moderation of floods.

## **Biodiversity Conservation Methods**

### **1. *In-situ* conservation methods**

Conservation of species in their natural habitats is known as *In-situ* conservation. This method of biodiversity conservation is the best way to protect the flora and fauna. The first step of this method is to find out the area where plants and animals are in very large number. After find out this type of area may be declared as national park, wild life sanctuary or biosphere reserve. By this process flora and fauna can be protect in their natural residence from human activities. In the study area there is mukundara hills national park. Wildlife sanctuaries are Darrah, Jawahar sagar, National Chambal, Ramgarh vishdhari and shergarh sanctuary. Ummedganj pakshi vihar is the conservation reserve of the region.

### **2. *Ex-situ* conservation methods**

It is the important method to conserve the biodiversity from outside of their natural habitats. The ways of this method are as gene banks, botanical gardens, zoos, microbial culture and others. Different techniques and facilities are provided to preserve plants and animals. In the study area there are ex situ conservation methods are working in these forms.

#### **Those ways are as follows**

1. By making Gene banks to preserve seeds, sperm and ova at suitable temperature. It is very useful to save many variety of species of flora and fauna in a compact place.
2. Collecting of in vitra plant tissue and microbial culture.
3. Through making of botanical gardens and zoos. They can be used in research and increase the public awareness about the various species.
4. Captive breeding in animals and artificial propagation in plants by reintroduction into the wild area.

#### **Conclusion**

Biodiversity conservation has become very essential in this period because there are many natural and human created threats are effecting the biodiversity composition. As population has increased in very large number so human is using natural resources in very huge scale. As result environment degradation, biodiversity loss and other problems are increasing. For saving flora and fauna it has become necessary to save them. Human is option less in the context of using Methods of *Ex-situ* and *In-situ* conservation for our better future and sustainable development.

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