



*Research Paper*

**IMPORTANCE OF WOMEN IN CONSERVATION OF BIODIVERSITY IN INDIA**

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**Abstract**

Human being and biodiversity is complementary to each other and women has important role in conservation of this diversity. Women have made a mark in many areas, including the environment. Women have been recognized as guardians of biodiversity. They also cared for nature and biodiversity since these provided necessary materials that allowed families and communities to survive. As primary custodians of traditional knowledge biodiversity, women should also be involved in the decision-making process in the use of nature and biodiversity resources. Data show that most wild plants are gathered and used by women for many purpose. As they remain in direct contact with nature, they possess detailed knowledge about the species and ecosystem. It is impossible to manage and conserve the biodiversity without involvement of women power. In fact, women can be considered as managers of natural resources. They are often plays a mediator role in passing of traditional knowledge Recognized as custodians of biodiversity, stronger efforts from all sectors can lead to greater strides in women as managers of biodiversity resources.

Key words: Biodiversity, community, ecosystem, women power, custodians, strides.

**INTRODUCTION**

Biodiversity is the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystem. At present, the estimated number of living species recorded from all over the world are 8.7 million approximately.[1].Biodiversity is a vital source for technological development in agriculture, pharmaceuticals and other technological innovations[2]. Though the geographical area cover of the country represents about 2.4% of the total landmass, it harbors a total of 47513 plants species (Singh & Dash 2014)[3]. Out of about 0.4 million hitherto known in the world representing as much as 11.4% of world

flora. Biodiversity is crucial for the ecosystem and is the foundation of life on earth as it provides us basic necessities of life i.e. food, shelter and clothing. Besides, it provides us with life supporting gas O<sub>2</sub>, dyes, resins, medicines, fibers, stable climate and recreation. India is a mega-diversity nation of the world and has great diversity of natural ecosystems ranging from the cold and high Himalayan regions to the sea coasts; from the wet north-eastern green forests to the dry northwestern arid desert; with different types of forests, wetlands, islands and the oceans [4]. In recent years many efforts have been taken to conserve the biodiversity. But the importance of women in the biodiversity conservation cannot be ignored. Women have always been accountable for the food, medicinal and nutritional needs of their families as they play an essential role in the households. They are also being involved in almost all aspects of farming, from seed selection and plantation to harvesting, weeding, winnowing and seed storage. As they remain in direct contact with nature, they possess detailed knowledge about the species and ecosystem. It is impossible to manage and conserve the biodiversity without involvement of women power. In fact, women can be considered as managers of natural resources. They often play a mediator role in passing of traditional knowledge which is locally much known as "Grandmother's cures" which includes many curative plant uses [5] [6] & [7].

There are also some examples which show that Indian women who are main custodian of biodiversity conservation. On the occasion of many Indian festivals they water and worship the important plants like *Ocimum sanctum* (Tulsi) which is planted in their courtyard. This is a symbolic representation of caring, devotion and respect towards some holy plants. Not only this, Indian women tie a cotton thread around the trunk of *Ficus religiosa* (Peepal) tree and worship it. This practice highlights the importance of *F. religiosa* as this tree not only releases oxygen but also provides shelter to a number of birds and other insects. Besides it, this tree has a thick canopy and provides shade and a place for rest under it to a number of other wild life creatures and human beings also.

Kitchen garden or home garden also being practiced by Indian women. These home gardens harbour various original varieties that are very often taken care of by women. Many plants are used for medicinal purpose by rural women. Many rural women from Madhya Pradesh use combination of plants as birth control agents [8 & 9]. Past evidences showed that women have become victims of development and environmental degradation. But as time passed it has been realised that they play a crucial role in the cultivation and management of diversity [10] women have also registered their strong candidature in biodiversity conservation as Indian women guarded the trees during the well-known Chipko movement. These ways women are involved in every aspect of biodiversity from its sustainable use to protection, preservation and religious faith.

#### **METHODS AND MATERIALS:**

The present study is based on an extensive literature search and relevance of cultural practices which are adapted by Indian women in various regions of India for the conservation of biodiversity. Conservation of biodiversity must for the continuation of

life on earth and the role of Indian women is of utmost importance for it. Indian women predominate as wild plant gatherers, home gardeners, plant domesticators, plant worshipers of some important plants and true custodians of biodiversity.

### Observation and Discussion

Some observations have been recorded for the role of Indian women in the conservation of biodiversity –

#### 1. Plants are conserved and worshipped by Indian women as home of God and Goddess-

History of India shows the witness of conservation of plants by the different movements in different places which was run by great Indian women.

S.No.	Vernacular name	Scientific name	Family name	Name of God & Goddess residing in plants
1.	Arjun	<i>Terminelia arjuna</i>	Combretaceae	Lord Brahma
2.	Ashoka	<i>Saraca asoca</i>	Fabaceae	Kama Deva or God of love
3.	Bel	<i>Aegle marmelos</i> Corr	Rutaceae	Lord Shiva
4.	Banana		Musaceae	Lord Vishnu & Goddess laxmi
5.	Neem	<i>Azadiracta indica</i>	Maliaceae	Goddess Durga & Neemari Devi
6.	Kadamba	<i>Neolamarckia cadamba</i>	Rubiaceae	Goddess Durga
7.	Kamal	<i>Nelumbi nucifera</i>	Nymphaeaceae	Gddess Sarswati, Laxmi
8.	Peepal	<i>Ficus religiosa</i>	Moraceae	Lord brahma, Vishnu & Shiva
9.	Chandan	<i>Santalum album</i>	Santalaceae	Goddess Parvati
10.	Tulsi	<i>Ocimum sanctum</i>	Lamiaceae	Lord Vishnu
11.	Madar	<i>Calotropis gigantean</i>	Asclepiadeceae	Lord Shiva
12.	Agasti	<i>Sesbania grandiflora</i>	Fabaceae	Lord Narayana

#### 2. Different movements run by women for conservation of plant diversity:

S. No.	Organization	Name of movement/Year	Place/Area	Related plants
1.	Gaura devi	Chipako Movement 1970	Chamoli, Uttra khand	Timber plants
2.	Suryamani Bhagat	"Save the forests of Jharkhand movement" 1980	Kotari village, Jharkhand	Sal forests
3.	Amrita Devi	Bishnoi movement	Khejarli village,	Khejari plants

		1700	Rajsthan	(Prosopis cineraria)
4.	Vasantha Sena (Green force)	"Vasantha sena movement"( 1810)	Villages near Periyar tiger reserve, Kerala	All forests
5.	Vasudha Chakrathi & Rathika Ramasamy	Indian wildlife Photographers	Whole India	-
6.	Koli-Agri Community	-	Maharastra	Worship Ayurvedic plants
7.	Women's " Forest conservation committee"	Bold conservation movement by women (2000)	Odisha	Plants of "Seven brother hill"
8.	Ujiyaro Bai	-	Madhya Pradesh	Forest conservation aroun Baiga Chakka belt

### 3. Plants conserved by Indian women as a source of food:

An Indian women is considered as custodian of culture and biodiversity. Indian women have conserved several plants and endangered cultivars of agriculture crops such as rice, maize, millet, grains, legumes, fruits, and vegetables. Women are also well versed with the economically important plant species of their area which they learned from their ancestors, make sustainable use of it and pass this knowledge to their future generations. This traditional knowledge helps them collecting edible products from forests products and grow them on their piece of land which are repositories of local biodiversity of plants of utility near the human inhabitations of the tribal and rural area of India[11]. This practice has not only played a significant role in domestication and conservation of varied plant species of Indian origins [12,13,11,14,15,16 & 17].

### 4. Diversity of plants conserved as a medicinal uses for Fertility, Menstrual disorders and other diseases by Indian women:

Complications associated with the reproductive health for women of childbearing age remain a leading source of morbidity and mortality globally. Nevertheless, menstrual disorders are normally not perceived as major health concern , and hence not considered in global reproductive health programs[18].Herbal remedies are considered as the oldest forms of healthcare that is known as mankind on the earth. Prior to the development of modern medicine , the traditional system of medicine that have evolved over the centuries within various communities are still maintained as a great traditional knowledge base on herbal medicine[19 & 20]. Traditionally, this treasure of knowledge

has been passed on orally from generation to generation without any written documents[21] and is still retained by various indigenous groups around the world.

Several medicinal studies have overlooked the significance of traditional use for women's health and either omit plants used for health[22 & 23] or group all uses under single generic terms, such as 'reproductive disorders'[24], 'Gynaecological disease'[25], or 'postpartum remedy'[26].

**Table: List of medicinal plants used for Female health issues**

S.N.	Local name	Scientific name	family	Parts used	Uses
1.	Arand	<i>Ricinus communis</i> L.	Euforbiaceae	Leaves	Secretion of more milk
2.	Gudahal	<i>Hibiscus rosa-sinensis</i>	Malvaceae	flowers	White discharge
3.	Neel	<i>Indigofera tinctoria</i>	Leguminosae	Leaves	White discharge
4.	Krishna tulsi	<i>Ocimum basilicum</i> L.	Lamiaceae	Leaves	Labor pain during child birth
5.	Papeeta	<i>Carica papaya</i> L.	Caricaceae	Fruits	Clean uterus and abortion
6.	Bhang	<i>Cannabis sativa</i>	Cannabinaceae	Leaves, Fruits	Gonorrhea
7.	Saunph	<i>Foeniculam vulgare</i>	Apiaceae	Leaves	Menstrual cycle regulation
8.	Gajar	<i>Daucas carota</i>	Apiaceae	Leaves	For abortion & Antifertility

### 1. Diversity of plants conserved by tribal women against Antidote of snake bite and Scorpion sting:-

From ancient time poisonous animals bites is a serious problem in the world. millions of people die every year because of poisonous animal's bite cases being the most common culprit. Following this, snake bite and scorpion bite is also common and global public health problem associated with substantial morbidity and mortality. It constitutes an occupational hazard especially in fields of agriculture for farmers, farm labours, villagers, migrating population and hunters. many plant species are of the great importance as such plants like *Elytraria acaulis*, *Lepidagathis cristata*, *Peristrophe paniculata*, *Acyranthes aspera* L. *Amaranthus* species, *Acorus calamus*, *Gynandropis gynandra* and *Bunchania lanzan* etc are beng used as antidote of snake bite.

Many plant species like *Andrographis paniculata*, *Acyranthus aspera*, *Calotropis procera*, *Ocimum santum*, *Embllica officinalis*, *Madhuca latifolia*, *Tamarindus indica* L. *Piper longum* L. and *Azadiracta indica* etc are used against Scorpion sting.

## CONCLUSION

India in the present scenario is rich in biodiversity. Indian women have helped in conservation of biodiversity. However, efforts for conservation have to be made in vertical as well as horizontal direction due to rapid industrial revolution. Conservation of diversity. Sustainable management, propagation of such valued flora and their in-situ as well as ex-situ conservation are the need of this century. conservation of biodiversity is must for the continuance of life on the earth and role of Indian women is of utmost importance for it .Indian women predominate as wild plant gatherers, home gardeners, plant domesticators and true custodian of biodiversity as discussed in this paper. There is great need of involvement of Indian women in all programmes pertaining to environment and biodiversity conservation from the grassroots level to the highest level because they are blessed traditionally for the conservation of biodiversity. Indian women are basically God fearing, passionate and caring for all living organisms, so they can play a supplementary role in all biodiversity conservation programmes initiated by government.

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