IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, March 2022
Impact Factor: 6.252

Role of Tribal Women in Conservation of Some Ethonomedicinal Plants

Solanki M. A. and N. S. Suryawanshi*
*PG Research Laboratory, Department of Botany
K. V. Pendharkar College of Arts, Science and commerce (Autonomous), Dombivli, Thane, Mumbai, India
suryawanshins002@gmail.com

Abstract: *Tribal women's in the conservation of scertain plant used as medicinal plant therefore, Total 1000 saplings were transplanted in forest are showing excellent growth. Though the tree species of Madhucaindica and Hollarhaena antidysenterica are showing slow growth, the Gymnema, Tinospora and Aristolochia are growing fast with sudden mortality . The tribal families are using their leaves as traditional medicine only under emergencies thus promoting natural pruning process. in-situ mode of conservation for these much needy medicinal plants in the backyard of hamlets of tribal families under women force was a grand success.*

Keywords: Tribal women's

I. INTRODUCTION

The urbanization and Industrialization activities are reclaiming precious forest areas of central part of India forcing thousands of tribal inhabitants to migrate in nearby urban pockets. The tribal's dependence on forest for their health and nutrition is presently under the stress because of ongoing deforestation activities resulting into increasing rate of child malnutrition mortality and disease on expectant and lactating mothers. The irregular inadequate rainfall, temperature rise are the other climatic factors pushing hundreds of medicinal plants under endangered critical categories which force the tribal community to depend on allopathy. Conservation of these endangered medicinal plants using local dependent community is the only true solution to solve this problem. This paper highlights the success story of tribal women group involved in successful conservation of five indigenous medicinal plants.

II. EXPERIMENTAL SITE

Petlawad is a Tehsil in Jhabua district of Madhya Pradesh state, dominated by tribal population in Central India. It is located 45 kmtowards East from District headquarters Jhabua and 305 km from State capital Bhopal towards East. This is a hilly terrain area covered by patches of thick forest showing habitat of tribal races in scattered hamlets.

Though this tribal belt shows three different aborigine components which are sub-tribes of*Bhils* covers *Patelias, Barelas* and *Bhilalas*. The *Patelias* were specifically selected for this study because of:

1. Dominance of women in the family core system
2. Their affection for forest and forest produces.
3. Total dependence on plant treasury as a source of food and medicine and
4. Their ancestral knowledge and preservation of Ethnobiological data with age old people in oral form.

Our objective was to tap the knowledge source from these age old tribals confirmed in the hamlets, documentation of this oral data in scientific way and restoring the endangered critical plants by adapting *in-situ* and *ex-situ* conservation strategies with the help of tribal women force well supported by local youth force as a care taker.

Gopalpura was the small remotely placed hamlet was selected for this study because of:

1. Close proximity to the surrounding forest
2. The total population belongs to *Patelia* tribe
3. Malnutrition below age six was noticeable
4. Women self-help group was active under the leadership of local NGO attention supported by local youth force.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, March 2022
Impact Factor: 6.252

III. METHODOLOGY

The experiment was initiated in June 2010 in small remotely placed tribal hamlet in forest area of *Jhabua* district. The Eleven women those having 10x10 sq. feet area in the backyard were selected under self-help group. They were trained on government forest department farm for in-house training in orchard development and maintenance. The age old people in the hamlet were interviewed for the common diseases and traditional medicinal plants used to cure them followed by the initial survey of surrounding forest areas to find out the present status of these medicinal plants. The observation of survey data shows that nearly nineteen medicinal plants needed for tribals in their day to day use as ethno medicine are reduced drastically in the surrounding forest. Most of them were the small herbs and climbers growing under the shade of large tree. Out of these nineteen, we selected five which need urgent conservation. The leaves and stem pieces of selected plants are used against diarrhea, dysentery, skin infection, wounds, cough and cold.
They are,

1) *Hollarhaenaantidysenterica*
   Common name: Kuda, Kutaj
   Parts used: Stem
   Uses: Dysentry, Abdominal pains, Leucoderma and Bronchitis
2) *Gymnemasylvestre*
   Common name: Madhinashini, Gudmar
   Parts used: Leaves
   Uses: Diabetes, Boils and Blisters
3) *Tinosporacordifolia*
   Common name:Gudbel, Giloy, Ambervel
   Parts used: Stem and Leaves
   Uses: Fever, Diabetes, Alzhimer, Piles and Urinary problems.
4) *Aristolochiaindica*
   Common name: *Isharmul, Hooka bel, Duck flower*
   Part used: Leaves and Roots s
   Uses: Fever, Diarrhea, Skin problems, Wounds and Snakebite
5) *MadhucaLongifolia*
   Common name: Mahua, Butter tree
   Parts used: Seeds and flowers
   Uses: Cough, Cold and Bronchitis

The plants of which roots, flowers, fruits and seeds are used were specifically avoided. The well-known saplings of these medicinal plants cultivated by women group itself during in-house training were given back to them in the ratio 5x20 for maintenance in their backyard for next six months which were carefully conserved by them for one year. Only organic manure and herbal pesticides were used and then transplanted in the surrounding forest area after first monsoon shower of 2011. The local youth force was involved in transplantation and care after their introduction to forest.
The entire experiment was based on sustainable innovative model which further divided in to four components.

1. Survey of Ethnomedicinal plants and their present survival status.
2. Conservation strategies for sensitive medicinal plants which require urgent attention
3. Plantation of exotic fruit trees in the back yards to provide additional food security to the family and also financial support.
4. Cultivation of nutritional garden in the back yard along with the orchard of medicinal plant trees to provide beta carotene and iron to overcome the vitamin A deficiency and nutritional anemia among the malnourished children below age six.

After admiring the successful role of women self-help group in conserving the medicinal plants, the forest department voluntarily distributed saplings of exotic fruit tree shrubs namely Amla, Lemon, Jamun, Custard apple, Guava, Mango, Papaya, Kamrakh and Jackfruit for plantation along the boundary wall of back yards. Each family involved in the model was given six plants. The experiment was a grand success. The tree plantation is showing healthy growth and

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, March 2022
Impact Factor: 6.252

likely to start fruiting. The concept of nutritional garden program was specially designed for each tribal family of a self-help group to overcome the micro-nutrient deficiencies in malnourished tribal children below age six. The dark green leafy vegetables were planted specifically to eradicate the anemia in growing girl children which is a serious health issue in this region. The local NGO was involved in the program. In the back yard of each family, a small plot of 12 x 12 feet sizes was prepared for plantation of root, fruit and leafy vegetables. Specific attention was given for variation of vegetables allotted to the Families to promote give and take relationship among them. Entire process was organic and families were insisted to incorporate these fresh produce in the regular diet of their children. The status of malnutrition and anemia was measured after four months and found to be very significant.

IV. RESULTS

Total 1000 saplings were transplanted in forest are showing excellent growth. Though the tree species of *Madhuca*and *Hollarrhaena* are showing slow growth, the *Gymnema, Tinospora*and *Aristolochia*are growing fast with sudden mortality in few plants. Though survival percentage for *Hollarhaena* and *Madhuca* was 100% in forest but for *Aristolochia* it was 80% just because of lacking of proper tree support. The tribal families are using their leaves as traditional medicine only under emergencies thus promoting natural pruning process also (Table1.).

V. CONCLUSION

This is *in-situ* mode of conservation for these much needy medicinal plants in the backyard of hamlets of tribal families under women force was a grand success. The entire family including the growing children was involved in conservation practices. The participation of local youth force and their active support in nurturing the saplings in forest habitat carries added significance to this *in-situ* success story. The conservation model is repeated in other two hamlets. Authors believe that the empowerment of women along with local youth force is the only sustainable solution for conserving the Ethno biological species which are on vanishing mode.

ACKNOWLEDGMENT

Authors thanks Mr.Piplad, Govt. forest officer and Mr. Ghanghoria, BDO, for providing in-house training to tribal women group.

BIBLIOGRAPHY

[1]. Adhikari, B. S., Babu, M. M., Saklani, P. L. and Rawat, G.S. 2003. Medicinal trees of Uttaranchal State : Distribution, Use pattern and Prospects for conservation. Indian Forester. 129 (2): 247-267.

[2]. Adhikari, B. S., Babu, M. M., Saklani, P. L. and Rawat, G.S. 2005. Distribution, Use Pattern and Potential for Conservation of Medicinal Climbers in Uttaranchal State. Indian Forester. 131(7): 901-916.

[3]. Alves R. and Rosa, I. 2007. Biodiversity, Traditional Medicine and Public Health: Where do they meet? Journal of Ethnobiology and Ethnomedicine. 3 (14).

[4]. Anonymous 1993. Guidelines on the Conservation of Medicinal Plants. World Conservation Union. IUCN, Gland, Switzerland.

[5]. Kala, C. P. 2007. Local Preferences of ethnobotanical species in the India Himalayas: Implications for Environmental Conservation in Current Science, 93(12): 1828-1934.

[6]. Rao, M. V. K. and Prasad, O.S. V. D. 1995. Ethnomedicine of tribes of Andhra Pradesh. Journal of N tfp. 2 (3&4): 105- 114.

[7]. Upadhye, A. S., Kumbhojkar, M. S. 1995. Medicinal Plant Resources from Moist Deciduous Forests of Maharashtra. In Higher plants in Indian Subcontinent, As Supplement Issue of the Indian Journal of Forestry.

[8]. Kothari, M. J. and Rao, K. M. (1999). Ethnobotanical Studies of Thane District, Maharashtra, J. Econ. Tax. Bot. 23 (2): 265-272.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, March 2022
Impact Factor: 6.252

Table 1: Conservation of medicinal plants

Name of Endangered species	Parts Used	Sapling Mortality in one year	Survival % in Forest
Hollarhaenaantidysenterica	Stem	10%	100
Gymnemasylvetre	Leaves	3%	90
Tinosporacordifolia	Leaves	3%	95
Aristolochiaindica	Leaves, Roots	Nil	80
Madhucalongifolia	Seeds, Flowers	5%	100