

Biodiversity Conservation by Van Mahotasav's in Gujarat

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1. INTRODUCTION

Social Forestry means the management and protection of forests and a forestation on barren lands with the purpose of helping in the environmental, social and rural development. The term **Social Forestry** first used in 1976 by the National Commission on Agriculture, Govt. of India. Government Forest areas are closure to human settlement and have been degraded over the years due to human activities needed to be a forested. Trees were planted in and around agricultural fields, along railway lines and road sides, rivers-canal banks, village common land, government west land and panchayat land are comes under Social Forestry.

Social Forestry also aims at raising plantations by the people to meet the growing demand for timber, fuel wood, fodder etc. Thereby reducing the pressure on traditional forest area through the Social Forestry Scheme, the Government has involve community participation, as part of a drive towards a forestation and rehabilitations the degraded forest and common lands.

Need of Social Forestry

The rural population depends largely on fuel woods and other biomass for their cooking. This demand for fuel wood will not come down but the area under forest will be reducing further. Then Govt. managed the project for five years, and then gave to the village panchayats.

Types of Social Forestry

The Social Forestry Scheme can be categorized into groups like, Farm Forestry, Community Forestry, Extension Forestry and Agro Forestry.

Individual farmers are being encouraged to plant trees on their own farmland to meet their domestic needs and they may want to provide shade for the agriculture crops, wind shelters, soil

conservation and to use wasteland. This Farm Forestry is a part of Social Forestry known as Agro Forestry. The raising of trees on community land, government is providing seedlings fertilizer and protection called Community Forestry or also called as Rural Forestry. Planting of trees on road sides, railway sides, wasteland is called Extension Forestry which increases the boundaries of forests. Agro Forestry may be defined as a sustainable land use system that maintains or increases the total yield of combining food crop together with forest tree and livestock ranching on the same unit of land.

For a decade 1970 to 1980 the State Government had made budgetary provisions for implementation of the Social Forestry work. The world bank was sought for extending the Social Forestry Program in a massive way. Gujarat state was been recognized nationally and internationally for its successful implementation of the Social Forestry Program during eighties. The cumulative achievement of Social Forestry works are as under :

- Strip Plantation (0.96 Lakh ha.)
- Panchayat Lands (1.22 Lakh ha.)
- Private degrade Lands (1.65 Lakh ha.)
- Seedling distribution (443.84 crores)

Objectives of Social Forestry in Gujarat

- A forestation in lands outside forest areas
- Increasing the number of trees in Gujarat
- Promote the participation of institutions and people in the field of growing trees.
- Increasing the yield of timber, fruits, firewood, fodder etc.
- To put less fertile and unproductive land to productive use.
- Augment the income of people by tree planning

- Increase employment opportunities of rural poor

2. VAN MAHOTASAVS IN GUJARAT

Due to economic and environmental changes World, Government of India laid down a new forest policy in 1988 to conserving the natural heritage of Flora and Fauna. Forest Management also emphasis on conservation of biodiversity by National Parks, Sanctuaries, Biosphere, Reserves and Protected Ares. Gujarat has more than 19000 Sq.Kms. of forests with rich Biodiversity. Based on revised classification 22 types of sub forests have been recognized in Gujarat.

In Gujarat Department of Forest, organized Van Mahotasavs in state, districts and taluka level with people participation in tree plantation. Vanmahotasav have been held at Gandhinagar (2004), Ambaji (2005), Taranga (2006), Somnath (2007), Chotila (2008), Shamlaji (2009), Palitana (2010) and Pavagadh (2011). Main objective is to create mass awareness about important trees and green cover.

Importance and preservation of tree is very useful for human beings, as per description given in the Purans each Grah (Planet), Nakshtra (constellation) and Rashi (Zodiacs) has its own favorite tree and plantation and protection of such trees gives positive effect and power to individuals. Each and every Van viz, Punitvan, Mangalyavan, Tirthankarvan, Hariharvan, Bhaktivan, Shyamalvan, Pavakvan, these all van constituted by Grah Vatika, Nakshtravan, Rashivan, Panchvati, Navgrahvan, Dashavatarvan, Devvan, Smritivan, Heritage corner, Dhanvantaryvan, Arogyavan, Nirog Balvan etc. directly or indirectly various species of tree plants were planted in above said plantations are given in the table below.

3. MATERIAL AND METHOD

The reports and publications published by Forest department of Gujarat are major source of secondary data for this paper. Individual folders were published according to Vanmahotsav viz, Punitvan, Mangalyavan, Shyamalvan, Hariharvan, Bhaktivan, Tirthankarvan and Pavakvan. Information about area, plant species, no of trees, nurseries, distribution of saplings were given in this booklet. Tree plants planted in Rashivan, Nakshtravan, Grah Vatika and Panchvati were given, so that the people can see and identify he trees with respect to their Rashi, Grah and Nakshtra.

Information regarding Social Forestry types of Social Forestry, Objectives of Social Forestry was available from www.gujaratforest.org. More ever various data regarding category wise forest area in Gujarat State and forest cover were also obtained from this website with respect to these information and data, the result is given in original form. Table -1

NAME OF TREES FAVOURABLE TO THE NAKSHTRA					
No	Nakshatra	Favorite tree	No	Nakshatra	Favorite tree
1	Ashwini	Strychnos nuxvomica.	15	Swati	Terminalia arjuna
2	Bharni	Embllica officinalis	16	Vishakha	Mesua ferrea
3	Kritika	Ficus glomerata	17	Anuradha	Mesua ferrea
4	Rohini	Syzygium cumini	18	Jyestha	Bombaxceiba
5	Mrigshira	Acacia catechu	19	Moola	Vateria indica
6	Ardra	Aquilaria agalocha	20	Poorvashada	Calamus spp.
7	Punarvasu	Dendrocalamus strictus	21	Uttarashada	Artocarpus heterophyllus
8	Pushya	Ficus religiosa	22	Shravana	Calotropis gigantean
9	Ashlesha	Mesua ferrea	23	Dhanishtha	Prosopis spicigera
10	Magha	Ficus benghalensis	24	Saiabhisha	Anthocephalus cadamba
11	Purva Falguni	Butea monosperma	25	Poorva	Mangifera indica
12	Uttara Falguni	Ficus rumphii	26	Bhadrapada	Azadirachta indica
13	Hasta	Jasminium auticulatum	27	Bhadrapada	
14	Chitra	Aegle marmelos		Revati	Madhuca latifolia

Table -2: Name of Trees planted in Rashi Van.

Aries	<i>Strychnos nuxvomica,</i> <i>Embllica officinalis</i> <i>Ficus recemosa</i>
Taurus	<i>Ficus recemosa,</i> <i>Syzygium cumini,</i> <i>Acacia chundra</i>
Gemini	<i>Acacia chundra,</i> <i>Aquilaria agalocha</i> <i>Dendrocalamus strictus</i>
Cancer	<i>Dendrocalamus strictus,</i> <i>Mesua ferrea</i> <i>Ficus religiosa</i>
Leo	<i>Ficus religiosa,</i> <i>Ficus benghalensis</i> <i>Butea monosperma</i>
Virgo	<i>Butea monosperma,</i> <i>Jasminum auriculatum</i> <i>Aegle marmelos</i>
Libra	<i>Aegle marmelos,</i> <i>Terminalia arjuna</i> <i>Mesua ferrea</i>
Scorpio	<i>Mesua ferrea,</i> <i>Bombax ceiba</i> <i>Shorea robusta</i>
Sagittarius	<i>Shorea robusta</i> <i>, Calamus rotung</i> <i>astocarpus heterophyllus</i>
Capricorn	<i>astocarpus heterophyllus,</i> <i>Calotropis gigantaia,</i> <i>Prosopis spicejera</i>
Aquarius	<i>Prosopis spicejera,</i> <i>Anthocephallus chinesis,</i> <i>Mangifera indica</i>
Pisces	<i>Mangifera indica,</i> <i>Azadirachta indica,</i> <i>Madhuca indica</i>

The favorites trees of each planet are as under					
No.	Planets	Favorite Tree	No.	Planets	Favorite Tree
1	Mercury	Achyranthes aspera (Chichida)	5	Sun	Calotropis procera (Aak)
2	Venus	Ficus glomerata (Gular)	6	Mars	Acacia catechu (Khair)
3	Moon	Butea monosperma (Palas)	7	Ketu	Saccharum spontaneum (Darbhe)
4	Jupiter	Ficus religiosa (Pipal)	8	Saturn	Acacia ferruginea (Shami)
			9	Rahu	Cynodon dactylon (Doob)

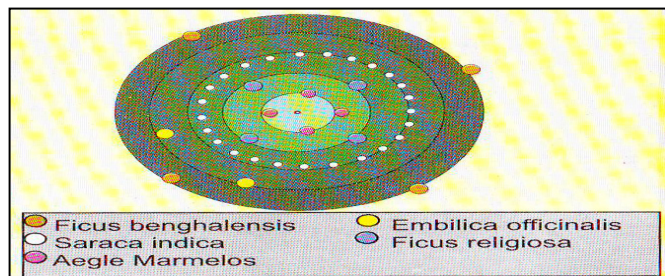


Figure 1 : Panchvati

As we know this nature includes vast range of biodiversity. With the help of these Vans and Nurseries, the State Department of Forest and Gujarat Ecological Education and Research Foundation (GEER) worked together for conserve about 80 plant species.

Table 4 : Different Categories of Forest area in Gujarat

Sr. No	Data Period	Reserved Forest	Protected Forest	Unclassed Forest	Total
1	2000-01	14155.18	394.85	4562.51	19112.54
2	2001-02	14216.38	377.56	4509.97	19103.91
3	2002-03	14257.09	378.12	4459.31	19094.52
4	2003-04	14225.56	378.82	4488.93	19093.31
5	2004-05	14263.70	378.85	4431.85	19074.40
6	2005-06	14271.4	379.13	4422.70	19073.23
7	2006-07	14270.94	383.37	4429.84	19084.15
8	2007-08	14349.24	389.27	4387.61	19126.12
9	2008-09	14364.55	389.31	4386.57	19140.43
10	2009-10	14368.27	389.31	4386.76	19144.34

4. RESULTS

The cumulative achievement of Social Forestry showed latest data of strip plantation(0.96 lakh ha.), Panchayat Land (1.22 lakh ha.), Private Degraded Lands(1.65 lakh ha.) and Seedling Distribution (443.84 crore). Latest data Collected from website of Forest Department, Gujarat State are 9.80 crore sapling planted in 13, 200 hector of land. Forest Department developed 430 permanent nurseries, 4140 decentralized nurseries, 250 temporary nurseries in urban area and 500 temporary nurseries in rural area. Each Van Mahotasav covers on an average 20 acre of land involving 50 to 60 plants species with 9500 to 10000 tree plants. If we consider 7 Van Mahotasav in Gujarat, the final figure goes to 140 to 150 acre of land and 65000 to 70000 tree plants.

The Table-1 showed that there are mainly three categories of forest in Gujarat. i.e. Reserved Forest, Protected Forest and Unclassed Forest were estimated 14155.18 hector, 394.85 hector and 4562.51 hector in 2001 respectively. After 10 years it was 14384.27 hector, 389.31 hector and 4386.76 showed increases in 213.09 hector in reserved forest, but indicate decrease 5.54 hector in Protected Forest as well as 175.75 hector in unclassified forest. Thus total forest is increased by only 31.8 hector in land.

These data clearly showed that decrease in unclassified forest is due to deforestation or other human activities. But the Forest Departments are trying to protect the existing forest and practices of a forestation, resulted in increase the area of Reserved Forest by 213.09 hector in Gujarat. It is also indicated that the forest cover was 11907 hector in 1991, whereas it was 14620 hector in 2009, increasing by 2713 hector land. Under Social Forestry the schemes like Strip Plantation, Village Woodlots, and Rehabilitation of degrade Farmlands, Environmental plantation, Kissan Nurseries, Decentralized Seedling distribution, Nursery, Van Mahotasav; improved crematoria were implemented by these programs. People have been motivated and roped tree planting activity. People are encouraged to plant tree in a lands such as unused land in the vicinity of their homes, village common lands, schools, colleges, hospitals etc. Folders pamphlets and other literature on forestry extension are also distributed to educate and motivate the people. This is helpful in the Social Forestry towards greening Gujarat as well as India.

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