

## CHAPTER - IV

**ECONOMIC AND ENVIRONMENTAL BENEFITS OF  
SOCIAL FORESTRY IN KOLHAPUR DISTRICT****4.1 INTRODUCTION**

The work of social forestry has been started in all the tahsils of Kolhapur district. The work of social forestry is not even in the blocks. In the west of the Kolhapur district due to larger and better geographical area, forestry, land, environment and rain there is sound development of social forestry, whereas in eastern part it is found that, due to less availability of land, environment, rain there is a slow development of social forestry. In order to study the social forestry, three blocks from the district have been selected viz. Gaganbawada, Karveer and Hatkanangale. In these blocks environmental condition for social forestry is different. That is why high rate of social forestry was found in Gaganbawada followed by Karveer and Hatkannangale.

**Geographical Area, social Forestry of Gaganbavada, Karveer and Hatkanangale of Kolhapur District****1) Gaganbavada :**

Gaganbavada is situated in the western part of Kolhapur District. Social forestry office was established in 1982. There are 39 villages in Gaganbavada tahsils. The geographical area is 28,228 hectare. In the west of Gaganbavada tahsil, there is Sindhudurg district situated in the south Radhanagari taluka, in the east Karveer taluka and in the north

Panhala taluka are situated. The main occupation of the people is agriculture. The main crops of these areas are sugarcane, jowar, rice, nachana etc.

The total area of social forestry of Gaganbavda is 10,626 hectares. Total cultivable area is 2,617 hectare and waste land is 1,216 hectare. The Department of Social Forestry has brought 737.50 hectare under forestry cultivation. The soil structure is of Jamba type. Rainfall is approximately 600 mm. Weather conditions and good mountainous areas are favourable for social forestry. The social forestry programmes should reach effectively to the farmers. Simultaneously the funds should be made available to the farmers, so as to bring wasteland under forest cultivation.

## **2) Karveer :**

Independent office of the social forestry was established in 1982 for Karveer taluka. There are 128 villages in Karveer taluka and the total geographical area is 67,194.98 hectares. There is a Pune-Bangalore National Highway in the east of the taluka. This taluka has a boundary of Hatkanangale taluka. The Temple of famous God, Jotiba is situated in the north. On the western side there are Gaganbavada and Panhala situated. Agriculture is the main occupation of the people. Mainly Sugarcane, Jawar, Bajara, Rice, Nachana, Groundnut are grown in this area.

The land in the taluka is mostly of slanting and hilly. The soil consists of medium sort and murum. Total forest area is 6,068.67 hectares, which measures 9 percent of the total land area. Following the National Forest Policy (Regulation), 33.33 percent of the total land has to be kept under forestry. So, the total land estimated for social forestry amounts to 22,405 hectares. Hence, the wasteland is to be brought under social forestry. Pasture land, wasteland, private land also can be brought under social forestry. The Government requires to encourage people to develop forestry. And public in general must respond these activities. The Government must make the sufficient funds available for this purpose. Total rainfall in this area is 2,500 mm. There is a favourable condition for the development of social forestry and also potentiality of development.

### **3) Hatkanangale Tahasil :**

As mentioned earlier, social forestry office was established in the year 1982. There are 62 villages with geographical area of 61,471 hectares.

Hatkanangale taluka is located at the eastern part of Kolhapur. At the West there is a Panchaganga river, and at the north Warana river. The average rainfall is 500 mm. The rainfall days are 45 to 50. Maximum and minimum temperature is 36<sup>0</sup> and 20<sup>0</sup>C respectively.

Sugar factories, cotton mills, handlooms and silver business are located in the taluka.

Total forest area of the taluka is 1,173 hectares which contributes 2.23 percent. According to National Forest Survey to maintain 33.33 percent of forest there must be 20,285 hectares of forest. It means 18,912 hectare land should be under forest.

The availability other than forest is as follows :

1. Permanent wasteland 5,123 hectare.
2. Waste land from last 5 years 1,663 hectares.
3. Pasture land 2,774 hectares.

The Department of Social Forestry has implemented various programmes and brought 937.04 hectares of land under forestry. There is a sufficient availability of wasteland. But there are constraints in implementing the programmes because of lack of rainfall (500 mm.), negative attitudes of the farmers, etc. Hence Government has to take necessary steps to implement social forestry programme by providing funds.

Three talukas of Kolhapur are being selected purposively viz. Gaganbavada, Karveer and Hatkanangale. From three talukas 25 beneficiaries are selected. Information required for the study is collected. Farmers have benefitted from social forestry, economically and socially.



#### 4.2 BENEFICIARIES FROM SOCIAL FORESTRY ACCORDING TO AGE CLASSIFICATION

25 beneficiaries are selected from Kolhapur district. Out of which 10 farmers from Gaganbavada, 5 from Karveer and 10 from Hatkanangale are selected. The age classification of sample beneficiaries are as follows :

**Table No. 4.1**  
Age Classification of Sample Beneficiaries

Sr. No.	Age Groups	Respondents	Percentage
1.	23 to 30	2	8
2.	31 to 40	4	16
3.	41 to 50	4	16
4.	51 to 60	8	32
5.	61 and above	7	28
Total		25	100

Table No. 4.1 indicates age classification of sample farmers. Age factor plays an important role in the participation of social forestry. Out of 25 farmers, 8 percent sample farmers belong to age group of 23 to 30 years. More than half of the sample farmers i.e. 15 (60 percent) belong to the age group of 51 and above years. Due to significance of wasteland development, large number of farmers belonging to such age groups have participated in the social forestry. From the information, it is noticed that the programmes are to be implemented in the upper age group as compared to smaller age group.

#### 4.3 MALE AND FEMALE CLASSIFICATION OF SAMPLE FARMERS

Male and female participation in social forestry plays an important role. The progress of any type of economic activity depends on the female participation. The male-female classification is shown in Table No. 4.2.

**Table No. 4.2**  
Classification of Male and Female of Sample Farmers.

Sr. No.	Age Groups	Respondents	Percentage
1.	Male	21	84
2.	Female	4	16
Total		25	100

Table No. 4.2 shows the male and female classification. Out of 25 sample farmers, 21 (84 percent) are males, whereas only 4 (16 percent) are female farmers. The workforce participation rate on the part of female is less as compared to male. Despite less participation, females are also playing a vital role in this activity. It is necessary to motivate them by arranging family discussions, government meeting emphasizing the significance of social forestry.

#### 4.4 CLASSIFICATION OF EDUCATION OF SAMPLE FARMERS

Educational background of sample farmers helps in motivating the economic activity. From educational qualification, we come to know

developments. There is also positive correlation between higher education and standard of living. In these talukas literacy rate is very low despite the widespread of higher education.

**Table No. 4.3**  
Educational Classification of Sample Farmers

Sr. No.	Age Groups	Respondents	Percentage
1.	Primary	5	20
2.	Secondary	12	48
3.	Graduate and above	4	16
4.	Illiterate	4	16
Total		25	100

The table No. 4.3 indicates the educational qualifications of respondents. Out of 25 respondents, 12 respondents (48 percent) have completed their education upto secondary school. 21 respondents are educated (84 percent), whereas only 4 (16 percent) are uneducated. The educated respondents must participate the programme. The literate farmers have to motivate illiterate regarding the benefits of forestry.

#### **4.5 OCCUPATION OF THE FARMERS**

Agriculture is the main occupation of Gaganbavada, Karveer and Hatkanangale taluka. But some farmers are employed. Simultaneously alongwith their job, they are looking after the farm activity.

**Table No. 4.4**  
Occupational Structure of the Farmers

Sr. No.	Age Groups	Respondents	Percentage
1.	Agriculture	22	88
2.	Service	3	12
Total		25	100

From table No. 4.4, it is noticed that nearly 22 respondents (88 percent) belong to the category of farmers (agriculture), whereas only 3 (12 percent) are in service. The farmers should be involved in the forestry activity so as to develop them economically. The social forestry helps to maintain environmental condition favourable.

#### 4.6 TAHSILWISE CLASSIFICATION OF RESPONDENTS

Tahsilwise classification is considered. Because majority of the respondents are from Gaganbavada and Hatkanangale.

**Table No. 4.5**  
Tahsilwise Classification of Respondents

Sr. No.	Taluka	Respondents	Percentage
1.	Gaganbavada	10	40
2.	Karveer	5	20
3.	Hatkanangale	10	40
Total		25	100

Table No. 4.5 shows the tahsilwise classification of respondents. Out of 25, 20 (80 percent) are from Gaganbavada and Hatkanangale and



rest of them are from Karveer. Majority of the farmers have been selected from above talukas because much wasteland is available in these talukas.

#### 4.7 INFORMATION REGARDING SOCIAL FORESTRY TO THE FARMERS

Through the questionnaire provided, it is noticed that the farmers received the information from Department of Social Forestry.

**Table No. 4.6**  
Sources of Information to the Respondents

Sr. No.	Source of Information	Respondents	Percentage
1.	Newspaper	0	0
2.	Radio	0	0
3.	T.V.	0	0
4.	Department of Social Forestry	25	100
Total		25	100

Table No. 4.6 shows sources of information received by the farmers. It is found that, the information published in advertisement given on radio, or T.V. is less effective compared to the information received from Department of Forest. The department motivated the farmers for the wasteland development. The entire expenditure was borne by the Government.



#### 4.8 SELECTION OF DIFFERENT PLANTS FOR THE WASTELAND DEVELOPMENT UNDER FOREST DEPARTMENT PROGRAMMES

Under the wasteland development programmes, farmers planted various types of trees like Australian, Babul, Suru, Nilgiri, Kashiya etc. The farmers gave much importance to the development of above mentioned trees.

**Table No. 4.7**  
Selection of Different Plants by the Respondents

Sr. No.	Type of Plants	Beneficiaries	Percentage
1.	Australian Babul	5	20
2.	Nilgiri	10	40
3.	Suru	5	20
4.	Kashiya	5	20
Total		25	100

Table No. 4.7 indicates the different types of plants grown by the farmers. The Department of Forest supplied the information regarding the different types of plants. Government has incurred entire expenditure on the plantation by the farmers. Nearly 10 farmers (40 percent) planted the Nilgiri trees. Rest of the farmers planted Australian Babul, Suru and Kashiya.

While planting the trees, the Department of Forest considered the type of soil, weather condition, rainfall and income. The Department of Forest made available all the facilities for the development of it.

#### **4.9 SELECTION OF PLANTS**

The Department of Social Forestry has selected different type of plants like Australian Babul, Nilgiri, Suru and Kashiya for different tahsils. The factors influencing different plants are as follows :

1. Guidance from Department of Forestry.
2. The Department of Forestry has made available different types of plants for the farmers.
3. Type of soil.
4. Favourable monsoon.
5. Availability of irrigation facilities
6. Favourable weather condition.
7. The selection of plants has been made on the basis of income to be received by the farmers.

The plant selection has been made on the basis of income, suitability of growth, less requirement of the water etc.

#### **4.10 TOTAL LAND UNDER SOCIAL FORESTRY FROM WASTELAND**

The tahsils of Gaganbavada, Karveer and Hatkanangale of Kolhapur district have brought nearly 106 hectares of land under social forestry.

**Table No. 4.8**  
**Total Wasteland Under Social Forestry (Hectares)**

Sr. No.	Respondents	Total wasteland	Land under social forestry	Percentage
1.	25	106	85	80
Total		106	85	80

Table No. 4.8 indicates wasteland development under social forestry. The total wasteland in these tahasil is 106 hectares. Out of which 85 hectares (80 percent) has been developed under social forestry. It means wasteland development has achieved remarkable progress on part of some farmers. Out of 25, 16 farmers used entire land for the social forestry programme, whereas 9 farmers are yet to use their land for the same. The remaining land of the farmers is to be brought under social forestry programme. Hence, it will lead to increase the area of forest.

#### **4.11 DIFFERENT TYPES OF LAND UNDER SOCIAL FORESTRY PROGRAMME**

There is a different type of soil found in different areas. In the west of the district, Jamba type of soil is found. In some areas, red and murum type of soil is found. Social Forestry programme is introduced in low quality of soil. The beneficiary farmers have planted the trees on the basis of type of soil.

**Table No. 4.9**  
Type of Soil and Social Forestry

Sr. No.	Type of Soil	Respondents	Percentage
1.	Jamba	10	40
2.	Murum and red soil	15	60
Total		25	100

Table No. 4.9 shows the type of soil and social forestry. The social forestry is undertaken in low grade land. Generally Jamba, murum, hills type of lands are used for plantation. In which it would be impossible to get the other crops. Due to social forestry, there will be improvement of soil, fertility etc. It also helps to create favourable environmental condition.

#### **4.12 EMPLOYMENT GENERATION AND SOCIAL FORESTRY**

The social forestry helps to generate the employment opportunities. Forest Department at block and district level helps the people getting the jobs. It also helps the local people in collecting the seeds from hilly areas. The seasonal employment is generated through such type of schemes. Initially all type of expenditure upto three years is borne by the Government. Later on it is the responsibility of the farmers to take care of the forest, which does not require any cost.



#### **4.13 ECONOMIC HELP FOR SOCIAL FORESTRY**

Under Wasteland Development Programme, Social Forestry Department undertakes the work of plantation. The Government is responsible to incur entire expenditure on such programmes. Social Forest Department undertakes the entire wasteland for cultivation upto three years. The Department undertakes the entire responsibility of plantation i.e. digging the holes, filling it with fertilisers and planting the trees.

The cost required for such type of waste is borne by Department itself. Government takes entire responsibility for the development. Co-operative Banks, Commercial Banks, Urban Banks do not provide any funds for such purposes.

The various types of banks should also participate in providing the loans for the wasteland development. They should provide short term and long term loans at low rate of interest. With the availability of such type of loans farmers will take the responsibility of wasteland development. But at present such type of scenario is absent.

#### **4.14 SOCIAL FORESTRY AND EXPENDITURE**

As stated earlier, the entire expenditure of wasteland development is borne by the Government. Upto three years the Government takes the entire responsibility. But after 3 years, farmers have to look after the trees. Farmers have to take care of culting the trees, supervision and

maintenance. But generally farmers do not incur such type of expenditure due to following reasons :

1. The conservation and maintenance is done by the old members of the family.
2. Some time such work is done by women and children at their spare time.
3. The supervision and maintenance is done by farmers as a subsidiary activity, the main being their farm works.
4. It is done by some farmers once a day or a week.
5. Some farmers do not supervise at all.
6. Social forestry having been in the vicinity of their residence, for some farmers it does not require any supervision cost.
7. Most of the farmers do not incur on cost at all for the supervision.

#### **4.15 BENEFITS FROM SOCIAL FORESTRY**

Farmers can get the benefit from social forestry. They can obtain the income from wasteland development programme. Alongwith income, the fertility of the soil will also improve. The farmers can obtain the income from following sources :

1. Income from wood.
2. Income from pasture land.
3. Income from small timber used for building.
4. Income from wood used as fuel.

The income received by the farmers is shown in the following table :

**Table No. 4.10**  
Sources of Income From Social Forestry

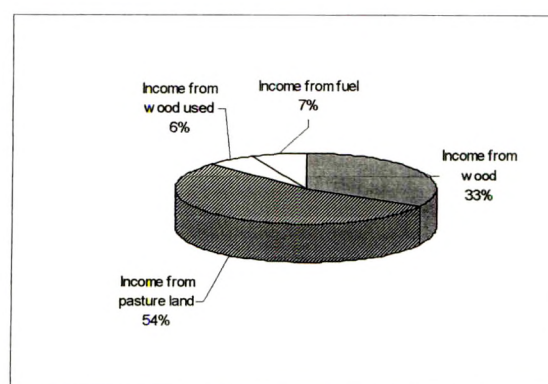
Sr. No.	Different Sources of Income	Total Rs.	Average	Percent
1.	Income from wood	8,45,000	33,800	33
2.	Income from pasture land	13,81,400	55,256	54
3.	Income from small wood used for buildings	1,71,000	6,840	6
4.	Income from fuel	1,83,700	7,348	7
Total		25,81,100	1,03,244	100

Table No. 4.10 shows income received from various sources of social forestry. The highest income is received from pasture, whereas the lowest income is received from wood used for small buildings. By and large income from social forestry is good. The average income received by the farmers is Rs. 1,03,244/-.





Income received by the farmers is shown with the help of pie-chart.



Sources of Income received by the farmers.

- 1) Income from wood 33%.
- 2) Income from pasture land 54%.
- 3) Income from wood used for small buildings 6%.
- 4) Income from wood used for fuel 7%.

The details of the income sources received by the farmers are as follows :

**1) Income from Wood :**

Total waste land of the Kolhapur district is 106 hectares belonging to 25 sample farmers. Out of which 85 hectares are brought under social forestry. The total income received by the farmers is Rs.8,45,000/- out of which the income received from wood is Rs.3,000/-. The per hectare income is Rs.9,941/-. Due to social forestry on wasteland development

the fertility of soil is improved. The farmers are getting advantage from the wasteland development.

**2) Income from Pasture Land :**

Under social forestry programme wasteland development programme was brought under cultivation. The pasture is developed. 85 hectares has been cultivated by the sample farmers. This helped them protect the land from cattle, to stop soil erosion and improve its standard. 25 farmers received the total income of Rs.13,81,400/-. The minimum and maximum income received by the farmer is Rs.3,000/- & Rs.27,000/- respectively. The per hectare income is Rs.16,251/-. The fodder problem is solved due to pasture land cultivation. The milk production has also increased.

**3) Income from Wood used for small buildings :**

Along with major source of income, the wood used for small building also received the income. Farmers constructed and also repaired their houses. They built stables for cattle. Due to plantation of Australian Babul, Nilgiri, Suru and Keshiya the farmers received the handsome income. The total income received by the farmers is Rs.1,71,000/- from 85 hectares. The minimum and maximum income received was Rs.3,000/- and Rs.10,000/-. While per hectare income was Rs.2,011/-. Due to this income, local needs of the farmers were satisfied.

#### 4) **Income from Fuel :**

Rural people need the fuel. The need is fulfilled by the social forestry. The stress and dependence on forest for fuel was reduced. The total income received by the farmers is Rs.1,83,700/- maximum and minimum income is Rs.2,000/- and Rs.14,000/-. While per hectare income from fuel is Rs.2,161/-. Such type of wasteland development programmes helped to improve the environmental condition.

#### **4.16 DEMAND FOR SOCIAL FORESTRY PRODUCT**

From the survey it is noticed that, there is greater demand for social forestry product. The farmer who cut the trees within 5 to 6 years have received less income. Whereas the farmers who cut the trees within the 10 to 15 year have received larger income. The farmers who sold their product through middlemen have received less income due to commission of the middlemen. The farmers who sold their product themselves have received handsome profit.

#### **4.17 DIFFICULTIES IN THE MARKETING OF SOCIAL FORESTRY PRODUCT**

From the survey it is noticed that, the farmers who cut the trees within 5 to 6 years have received less income. The demand for such wood is less because of low quality of wood. Whereas the farmers who cut the trees within 10 to 15 years have received the handsome profit, because of good quality wood. Some farmers don't have their own



transport facilities. Hence farmers are compelled to sell it through middlemen. Consequently, they face a loss. In order to cut the trees, the farmers must obtain the permission from forest department since social forestry is carried through this department. For this purpose they have to waste their time and money also. Farmers feel difficulties in carrying such work. The social forestry department must control and supervise the trees, and also see that, the farmers should not cut the trees within 5 to 6 years.

#### **4.18 SOCIAL FORESTRY AND CHANGE IN LAND**

Social forestry is carried on wasteland. Hence waste land is brought under use. Due to social forestry land gets improved in respect of fertility. It also helps soil conservation. The water table may go up. Hence long run development is possible on wasteland for getting the crop. Thus it is beneficial both economically and environmentally.

#### **4.19 SOCIAL FORESTRY & CHANGE IN TEMPERATURE**

Due to increase in the area of social forestry, the environmental benefits have also increased. It creates better weather conditions, reduces environmental pollution, increases the rainfall, increases the water table, animals and birds get the shelter, human being get better environmental atmosphere. The farmers today have accepted these favourable changes in environmental conditions.

#### **4.20 SOCIAL FORESTRY AND SOCIAL APPROACH**

Social forestry programmes are essential from social and economic point of view. Farmers have sufficient wasteland. The farmers should bring entire waste land under this programme. Farmers should take the care of soil conservation, plantation. In order to bring 33.33 per cent of the total land under social forestry, the farmers should co-operate for such activities. Farmers should realise the benefits of social forestry. By considering all the benefits of social forestry, the farmers should try to bring entire waste land under cultivation. Waste land belonging to Gram Panchayats also should be brought under social forestry and Gram Panchayats should take care of it. Village people also should look after the social forestry, since social forestry is essential to maintain favourable environmental conditions. Gram Panchayats, Voluntary Associations, Women Association, retired people, schools and colleges should be motivated to enhance the activity. These associations should propagate the activity as part of social work. Government, semi-government institutions also participate in such type of activity. The success of social forestry lies in the sincere efforts of these institutions.

#### **4.21 SOCIAL FORESTRY- GOVERNMENT APPROACH**

In order to bring wasteland under social forestry to make it 33.33 per cent of the total land, Government should implement the programmes effectively. Farmers in many villages have not yet been provided with the complete information and guidance regarding the

social forestry. There is also misunderstanding on part of the farmers. The Government controls the wasteland upto 3 years, but whether after three years Government transfers the land to the concerned farmers or not is the main misunderstanding, which requires to be removed. The effective advertisement is necessary on radio, in newspaper and on T.V. In order to obtain maximum income in the are of wasteland the joint efforts are essential. The benefits of wasteland development should teach the farmers. The effective guidance should be given to the farmers so as to increase the area under social forestry programme.

Instead of selecting particular kinds of trees for social forestry, other species of trees helping yield honey, sealing wax, leaf-plates, beetle-leaves also should be planted. Further emphasis should be given on medicinal plant horticulture etc. Such type of plants give more profits to the farmer. Farmers should be compelled to plant such type of trees. The Acts be enforced against the stealthy cutting of trees and there should not be interference of political leaders in releasing the culprits.

The Government should create a better market for the products of social forestry. The Government should guide the farmers regarding the marketing of medicinal plant. The Government should also give incentives to the farmers. The sincere and dedicated people should be appointed in the social forestry department. The sufficient funds should be made available to the farmers. For the wasteland development efforts should be made to bring more land under social forestry programme.

#### **4.22 ECONOMIC AND ENVIRONMENTAL BENEFITS OF SOCIAL FORESTRY**

Social forestry is beneficial to the farmers as well as to the whole society.

##### **A) Economic Benefits -**

1. Public and Private land can be used for social forestry.
2. Private wasteland development obtains income to the farmers.
3. Farmers can receive the income from wood, fuel and wood used for small buildings.
4. Employment can be generated.
5. Economic condition of the farmer will be improved.
6. Local needs of the society will be satisfied.

##### **B) Social Benefits -**

1. Fertility of the soil can be maintained.
2. Fertility will be improved.
3. Water table will be improved.
4. Local need of fuel can be satisfied. Hence there will be no cutting of trees from the forest.
5. Rainfall will be increased.
6. Favourable conditions will be created for living animals.
7. Cool and conducive atmosphere will be created.
8. Ecological balance will be maintained with the help of social forestry.

## CONCLUSION

Social forestry is essential and vital for the society. Ecological balance is to be maintained by bringing the waste land under social forestry by 33.33 per cent of total land. Environmental degradation can be prevented with help of social forestry. With coordinated efforts of Government, individual, society, voluntary it is possible to develop wasteland movement. All the factors of the society should participate in such type of activity. It should be seen seriously otherwise beautiful environment will be degraded.





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