CHAPTER - VII
SUMMARY AND POLICY IMPLICATIONS

Introduction

Forest is the life-line of all living beings on earth. Forest cover is essential for sustenance of life and also for maintenance of ecological, biological and environmental equilibrium. Forests have played a vital role in the socio-economic and cultural life of the tribal people of India. The tribal group of Malekudiyas inhabit a wide ecological and geo-climatic conditions on the Kodagu hills. Malekudiyas depend upon forest for their existence in several ways. Their degree of dependence varies with several factors including socio-economic conditions, distribution, cultural and religious norms, and literacy.

The present study undertaken with the objective of studying the role of MFPs in the tribal economy in the Western Ghats region of Karnataka. In this study, an attempt was made to study the role of MFPs in employment and income generation; to identify the factors, influencing collection of MFPs; to study the gender issues in collection, processing and marketing of MFPs; the marketing channels involved in the marketing of MFPs and to study the linkages between the MFPs sector and other sectors of the tribal economy.

The present study was confined to the Kodagu forests of Karnataka. The Kodagu forest division was selected for the study since this division is rich in a variety of MFPs and the Malekudiyas depend on them not only for their subsistence but also for earning their income. Detailed data collected from the tribal households. All the Malekudiya households were sought after and interviewed for the purpose of the study.

The present chapter has the purpose of summarizing the thesis and speaks of the findings and conclusions drawn from the study using the
questionnaire survey of 241 tribal households of the Malekudiyas of the Kodagu district. The 241 households are the entire Malekudiya households in the district, who could be considered as the representatives of the Malekudiyas of the state of Karnataka. The chapter also speaks of some of the findings of already existing literature and makes some recommendations for improving the future of the Malekudiyas.

**Summary**

The thesis has been organized in seven chapters. The first chapter has introduced the background for the problem of study and also the Malekudiyas in the overall tribal context of the state of Karnataka and Kodagu district. It has outlined the objectives as well as the research focus of the study, briefly introducing the methodology used. The significance of the challenge in the study lies in the fact that this community has improved its standards of life and, for it, intermingling with other communities has been very simple. The expansion of the government facilities supporting their education, basic health needs, agriculture and other fundamental rights to life and development, and an awareness for acquiring basic needs through the government agencies have encouraged them to achieve a better life in society. The second chapter has reviewed several relevant researches that have concerned themselves with tribal development and especially the dependence of the tribes on the minor forest produce they collected, used and also marketed for their livelihoods. The review has been able to enhance the value of the background of the study.

The third chapter is a descriptive account of the district of Kodagu, Karnataka, particularly its geography, and then an account of the tribe in relation to the topic of the study. The tribes of Karnataka have been known for their costumes, cultural habits, folk dances and songs, foods and their way of celebrating different festivals. The list of the tribes of Karnataka state includes *Bedar tribe, Toda tribe, Hakkipikki tribe, JenuKuruba tribe, KaduKuruba tribe,*
Kattunayakan tirbe, KondaKapus tribe, and Sholaga tribe. The Bedar tribe is worth mentioning which is far famed in several names, namely, Beda, Berad, Boya, Bendar, and other names. Another tribal community of Karnataka is the Hakkipikki tribe. The birth of this Hakkipikki tribal community has rich history, which also established a relation with the famous RanaPratap Singh. Karnataka state has 1.92 million tribal population and distributed in many districts of the state. Kodagu (formerly known as Coorg) district is the smallest district of the 30 districts in the state, both are famous for its scenic beauty and commercial agro-products along with its rich cultural heritage and historic valour. Spread over 4,102 km, towards the south western tip of the Deccan Plateau that forms the Western Ghat region of the state. This small district holds a population of the indigenous / tribal groups categorized as the Malekudiyas by Hassan district on the north, Mysore district on the east, Dakshina Kannada on the west and the state of Kerala on the south. In reality, Kodagu is a beautiful hilly place interspersed with coffee estates, paddy fields and tribal settlements in their forests. With no major industry in the district, agriculture/plantation determines the pattern of social life and development.

There are 31 hamlets in the district but with varying numbers in six different places. Kakkabbey has 73 households (30.3 percent), Galibeedu has 55 households (22.8 per cent), Bettathuru has 31 households (12.9 percent), Bagamandala has 28 households (11.6 percent), Thora has 44 (18.3 percent) households and Chelavara has 10 households (4.1 percent). Malekudiya households found in Kodagu district number 241 and the researcher has taken all the households for collecting the primary data.

The fourth chapter deals with socio-economic and educational conditions of the Malekudiya’s. The fifth chapter focus on collection, processing and marketing of Minor Forest Produce and also deals with the dependency of Malekuidiya tribe on MFP.
The sixth chapter revels about government schemes with special reference to Malekuiya tribe in Kodagu region to how far these schemes have uplifted their socio-economic condition and to lead to normal life with other communities. The last chapter portrays the summary of finding, inferences and conclusion of the study.

Findings and Conclusions

The following are the findings and conclusions capsuled from the study, particularly from the core chapters. They are the most significant in the study.

I. Socio-Economic conditions of Malekudiyas

- The Malekudiya tribe are relatively modern in their outlook and the educational attainment of the people interviewed indicate that they have travelled far for getting education. Nearly 46 per cent of the people interviewed have had primary education, 12.45 per cent each have had middle school education and secondary school leaving certificate, or what is popularly known as SSLC, respectively.

- Small families among them (1-3 members) account for 25.8 per cent of the households, medium families (4-6 members) for a majority of 61 per cent, large families (7-9 members) for 11.6 per cent, and very large families (9 plus members) account for 1.6 per cent of the households.

- That 62.66 per cent of the Malekudiya households are nuclear and the rest of them (37.34 per cent) are joint or extended – 151 nuclear families against 90 joint or extended families amidst the tribe.

- There are people who have lived in their habitations for as long as 20 years or less and as long as 90 plus years. Most people are middle-aged and are economically active (about 40 per cent) and the older population is sizeable (about 4-5 per cent above 75 years) but not a burden on the families as most of them are still active and look after themselves.
• They do own both dry and wet (irrigated) lands, for not all of them. While 76.76 per cent of the households own dry, unirrigated lands, a large majority of 83.82 per cent of the households do not own any irrigated lands at all. Thus, only 16.18 per cent of the tribal households own irrigated lands.

• About 38 per cent of the tribal households are marginal and small landholders, about 40 per cent of them are medium landholders and the rest large landholders. Only a few of the tribal households own both irrigated and unirrigated lands and cultivate different crops, plantation and food.

• Sixty eight per cent of the Malekudiya households are engaged in coffee cultivation whereas 64.7 per cent of them are engaged in cardamom cultivation. Pepper is grown by 41.9 per cent of the households. Banana, which is a delicate crop in the sense that it gets destroyed by the winds of the monsoon, is grown only by 13.3 per cent of the tribal households. Ginger is grown by 5.4 per cent of them. Oranges are grown by 1.2 per cent of them. And paddy and other crops are grown by 3.7 per cent of the tribal households each.

• The income of the Malekudiya households range from Rs.12,000 to as much as Rs.36,000. Households with annual incomes more than Rs.36,000 account for 2 per cent of the households only. Those who make adequate annual income of Rs.24 - 36,000 account for a small percentage only (7.4 per cent).

• An annual income of a large majority of the households (90.5 per cent) is reportedly small and inadequate to meet even the basic requirements of the tribal households, for 32.4 per cent of them make less than or equal to Rs.12,000, which means that they make less than Rs.1,000 a month, and for 58.1 per cent of them make between Rs.12,000 and
Rs.24,000. Just about 2 per cent of the households may, just may, have comfortable living with their annual incomes.

- On the other, 42.8 per cent of the households report of an income of Rs.6,000 to Rs.12,000 a year, which is somewhat better although it could only give bare sustenance to the households. Incomes beyond Rs.12,000 and in the range of Rs.24,000 may about make it possible for both end to meet for the households. About 17 per cent of the households report of such incomes from agriculture: 12.4 per cent of them between Rs. 12,000 and Rs. 18,000; and 4.6 per cent of the households between Rs. 18,000 and Rs. 24,000; and 0.4 per cent of the households more than Rs. 24,000.

II. Crops
- Various crops like coffee, pepper, cardamom, orange, ginger, paddy, banana etc. were cultivated. Among which the coffee produce was the maximum of 68 per cent, pepper 41.9 per cent, cardamom 64.7 per cent, orange 1.2 per cent, Ginger 5.4 per cent, paddy 3.7 per cent, Banana 13.3 per cent and other 3.7 per cent.

- Maximum coffee production was found in the Thora and Chelavara region whereas Bettathur has the least produce of 19.4 per cent. A significant differential cultivation of coffee was also observed among the Malekudiyas.

- As for pepper, Chelavara had the maximum produce of 100 per cent and Bettathur had the least produce of 3.2 per cent, Bettathur had the highest produce of 96.8 per cent and Kakkabey had the lowest produce of 23.3 per cent. The highest production of ginger was found in Galibeedu region, that was, 20 per cent. The lowest produce was in Bhagamandala region which was 7.1 per cent. No other region cultivated ginger. Bhagamandala produced the highest amount of paddy, that is, 14.3 per
cent and Galibeedu produced the least of 9.1 per cent. No other region cultivated paddy. Banana was maximum in the Galibeedu region which was 34.5 per cent and the least of it was found in the Thora region which was 4.5 per cent.

- Chelavara produced the highest amount of oranges (20 per cent) and Kakkabey produced the lowest of 1.4 per cent. The other regions did not produce oranges at all.

- Other general crops were found maximum in Thora which was 18.2 per cent and minimum was found in Galibeedu which was 1.8 per cent whereas the other regions showed none other.

It has been observed that the tribal families covered in this study were marginal farmers with less than 1.5 acres of land each. Traditional Kodagu crops such as coffee, pepper cardamom, orange, ginger, paddy, and banana have not been very successful for them because of lack of availability of cultivable land and technology. As a result, the Malekudiyas depended much on the Minor Forest Produce (MFP) such as honey, soapnut berry, and flowers used for paints, resin, and other products which they could collect from the forests. The tribes have used their traditional rights to these produce and make a living on them.

III. MFP: Collection, Processing and Marketing

- Since 90 per cent of the households are involved in MFP collection, processing and sale for a living, the Malekudiyas’ dependence on the MFPs for livelihoods is very clear. Small it may be but the income from the MFPs does supplement the income from agriculture and wage labour such that the tribal people put a premium on their dependence on the MFPs.

- Income from the sale of MFPs is not very high either. This income has a range of Rs.1,000 to Rs.12,000. Only 90 per cent of the households
report of income from the MFPs. Nearly 38 per cent of the households report less than or equal to Rs. 3,000; 41.1 per cent of them receive between Rs.3,000 and Rs.6,000; just about 10 per cent make an income between Rs.6,000 and Rs.9,000; and 1.2 per cent of the households make more than Rs.9,000.

- All of the households are involved in the collection of the MFPs but not all of them collect for selling and making money for the households. Some small percentage of the households collect the MFPs for their own use, for everything they could collect can be consumed as collected or with little processing. Tribal households use the MFPs diligently enough such that they may reap the benefits of their use just as their parents and grandparents have used them in the past.

- Asked about how long they were employed in various activities, 97.5 per cent of them have indicated to an average of 92 working days in agriculture and allied activities, 89.6 per cent of them have indicated to 61 man-days in the collection of minor forest produce, and 66 per cent of them to 122 man-days in wage labour.

- Honey (jenu) collection is the MFP activity involved in by a large majority of 88.4 per cent of the households, soapberry (Seegekai) by 83 per cent, anis-flower (rampatra) by 36.1 per cent, incense (samprani) by 31.1 per cent, resin/gum (antwala) by 29 per cent, and tree moss (marapachi) by 18.3 per cent. All minor forest produce collected are used for either industrial or medicinal purposes and fetch incomes for the Malekudiya households.

- Jenu, Antvala, Rampathra, Seegekai, dhupa is the MFP which is found in abundance in the region. Jenu is used for medicinal purpose, Antvala is used for washing utensils of temples and idols, rampathra is also used for coloring, Seegekaye, is used for temple and used by people in the
region. Dhupa, is a substance which is used by all community for pooja, ritual customs, for all purpose in the region.

- Marapachi is used for making food tasty in this region. It is used with ghee rice and bath. It is famous among all communities. If we focus here, it is the tribal who are contributing for the religious purpose by providing MFPs on one hand, it is the culture of the region and on the other tribal collection of MFPs as customs and economic substances while there are not engaged in agriculture and labour work.

- Here we have come to know that tribals dependence on MFPs is economic livelihood, tribal dependence on MFPs and its use in religions which can contributes to culture. So this can be considered as Socio-Economic and Cultural sustainability and societal importance of this aspect of MFP.

- While nearly 89 per cent of them have followed traditional methods of MFP collection, some 11 per cent other, improvised methods. People interviewed have suggested that the collection of MFPs such as honey, soap berry, anis flower, tree moss and the like requires special skills and the tribes acquire them by observing their peers on-the-job. Presently, several of them have skills acquired at the higher level of expertise.

- Ninety per cent of them say that the prices of MFPs are fixed by the LAMPS. Different produce are sold at different prices as the MFPs are of different monetary value for the users. Honey is sold at Rs. 100 (51.9 per cent) or at Rs. 120 (37.8 per cent) to a kilogram. Resin could be sold at prices widely varying, with 8.7 per cent of them selling at Rs. 6 per kg while 18.3 per cent of them selling at Rs.35 per kg. Resin is more like gum and it is a tree secretion with industrial and medicinal value. Similarly, there are price fluctuations in soap berry sale as well: from Rs. 5 to Rs. 15 to a kilogram.
• Nearly 80 per cent of the tribe travel by jeep for they are fast and 65 per cent of them travel by buses as well and they are time consuming in their travels. Both jeeps and buses have several stops and they are never regular stops alone. Less than a fourth of them (23.2 per cent) use other transports such as the two wheelers and they often pillion-ride MFPs to the LAMPS.

• Besides the LAMPS, the other markets where they sell MFPs are the weekly shanties and the private retail units in the area. For a question where is selling MFPs profitable, only 5.8 per cent say it is at LAMPS, 5 per cent at the shanties, and 86.3 per cent at the private retail outlets.

• They do not however sell their produce through middlemen. However, the dominant communities of the district, namely, Coorgies, Gowdas, and Malayali do exert pressure and bargaining in their sale of the MFPs. About 41 per cent of the tribal households feel compelled to sell their produce at lower prices by the Coorgies and the proportions for the Gowdas is 42.7 per cent, and for Malayalis is just 1.2 per cent. These communities bargain for lesser prices, more often than not.

IV. Marketing

However, the collection and marketing of the Minor Forest Produce has not been easy for them. The government had to support them both for production and marketing of tribal products in Kodagu district.

• The existing market system consisted of ‘fixed price and sale of produce’ type of marketing. The highest price fixed was at Thora, which was 100 per cent of the real product value and the least found in Chelavara, which was just about 30 per cent and the overall percentage among the villages was 89.2 per cent Maximum percentage of tribes selling to LAMPS was found in the region of Bhagamandala which was 21.4 per cent and the least was found in the Kakkabbe region which was 1.4 per cent.
The overall percentage among all the regions was that 5.8 per cent of the collectors sold to LAMPS.

Weekly Market was held once a week. The highest percentage of produce sold was in the Weekly Market held at Bhagamandala, which was 25 per cent and the least was found in the region of Kakkabbe which was 1.4 per cent. The comparative percentage among all region was 5 per cent.

Private refers to the tribes selling the MFP individually at various markets. This was mostly practiced in the Thora region which was 100 per cent and the least was found in Bhagamandala, which was 64.3 per cent. The overall percentage among various regions was 86.35.

The study has shown that all the villages/tribes indulged in direct sale. A majority was found in the Thora region with 100 per cent and the minimum could be found in Bhagamandala with 67.9 per cent and the overall percentage among all the regions was 89.2 per cent.

The strategy market was found only in the Bhagamandala region which has 10.7 per cent whereas all the other regions showed none. This way, the overall percentage of the whole region was just 1.2 per cent.

People have suggested that they wanted the LAMPS near their hadis. This demand was found mostly in the region of Chelavara and the least demand was found at Galibeedu, whereas Bhagamandala and Bettathuru showed no such demand. The overall percentage among the regions was 25.3 per cent.

**Utilization of government schemes**

Nearly 49.79 percent of the tribes are befitted under the agricultural schemes, which majority of them come under supply of commercial plants (38.33 percent) and bullocks (23 percent).
• Only 8.71 percent of the tribals have utilized the horticulture schemes. Nearly 42.32 percent of the tribes are utilized the animal husbandry schemes in which majority of the beneficiaries come under the piggery unit (81.37 percent).
• Nearly 47.72 percent of the tribes are beneficiaries under self-employment scheme which majority of them come under the Beekeeping (98.26 percent) unit.
• Only 62.66 percent of the tribals have utilized the housing schemes, which majority of them comes under construction of housing 77.48 cent, and distribution of housing material (22.52 per cent).

Implications- Dependency of MFP

Tabular analysis involving the use of simple statistical tools like frequency and percentage analysis and correlation analysis were employed, in the studies reviewed for the purpose of corroboration, to analyse the data of the tribal households, to examine the issues in collection, processing and marketing of MFPs and to study the marketing channels of MFPs.

The findings of the studies reviewed earlier in the second chapter and the relevant ideas on the Malekudiyas' dependence on the MFPs are summarised below:

MFPs generated the maximum employment on the hills as well as when the settlements of Malekudiyas were pooled. The employment generation was more in interior block (53.27 per cent of total employment) when compared to periphery block(51.33 per cent). The second important employment generator was wage labour in all the three cases (interior, periphery and pooled). However, it was more in periphery block (28.44 per cent) as compared to interior block (21.62 per cent per cent).
The MFPs contributed the most to the total income of tribal households. However, the contribution was more in interior block (54.12 per cent of total income) when compared to periphery block (44.10 per cent). Among the various MFPs available in the study area, the three major MFPs from the point of total income (cash and non-cash) generation were fuel wood, green fodder and seegekai (soapnut berry).

The MFPs, employment and allied activities were positively related with MFPs income. Family size was negatively related while dependency income were positively related with MFPs income in the case of Malekudiyas. In ratio, agriculture income and MFPs employment were positively related with MFPs income. When the settlements were pooled, dependency ratio, agriculture income, allied income and MFPs employment were positively related with MFPs income.

The analysis of data indicated that family size increased the probability of a household going in for collection of MFPs while agriculture income and wage income decreased the probability of a household going in for collection of MFPs. Agriculture income and wage income reduced the probability of a household going in for MFPs collection.

The analysis revealed that the most important discriminating variable between the households was the income from MFPs. In respect of the discrimination between non-collectors and collectors of MFPs, agriculture income emerged as the most important discriminating variable.

Men dominated in respect of both the time spent in and quantity of MFPs collection. In case of all MFPs except fuel wood, greens and mushroom, men spent more time and collected more quantity than women. Women spent significant amount of time and collected large quantities of fuel wood, greens and mushroom. The role of children was considerable in the collection of fuel wood only.
• Women spent more time and processed more quantity of MFPs than that of men except in the case of seeds and nuts. The role of children in processing activities was negligible.

• Men marketed more quantity than that of women in the case of all MFPs except harda. The role of children in marketing of MFPs was negligible.

• Five marketing channels were identified in the trade of MFPs in the study area. MFPs of perishable nature like appimidi, gooseberry and mushroom were sold to consumers directly by the tribal collectors. Forest Department procured seeds for nursery purposes. Low value MFPs were invariably sold to forest contractors only by the collectors.

• In case of high value MFPs, two channels existed. The collectors realised better prices when they sold the produce to traders compared to contractors. In the case of medium value MFPs also, two channels existed and in some cases, collectors realized better prices when sold to traders and in other cases, they got better prices when they sold to contractors.

• In case of agriculture, paddy sub-sector had the highest production possibilities in the region. With regard to household income, it was found that the food sub-sector of MFPs had the highest multiplier in the region. In case of agriculture, paddy and arecanut had the highest prospects in the region. Trade sector had the lowest prospects in the region.

In order to improve the value-added of MFPs in the tribals, it is important to provide such facilities that would enhance the processing, storage and marketing of MFPs. In regard to the study area, it is required that societies have to be established near the hadis of Thora, Kakkabbe and Chelavara and beekeeping boxes as well as drying and powdering machines and warehousing
facilities be provided to them. These facilities have been established in other study areas except in these three hadis.

**Policy Implications**

- The increase in agriculture income and wage income tends to reduce the probability of a household going in for MFPs collection. Hence, development of agriculture as an economic occupation and providing the households with more wage employment opportunities will not only add to the household income but will also reduce the pressure on MFPs.

- Livestock sector had the highest production multiplier implying that any investment would generate relatively large returns in this sector as compared to other sectors. The investment in the agriculture sector (especially in the case of field crops) was found to benefit largely the landless and marginal households. Hence efforts are called for in the direction of increasing investment in these two sectors which will ensure more equitable distribution of income.

- Women spent more time (>50 per cent) in collection of fuel wood, which was mainly for the purpose of food preparation and family support programmes. Hence if good supply of subsidized gobar gas becomes a possibility for the above said purpose, it would then reduce the drudgery of women and collection of MFPs and thus environment protection.

- Collectors realized better price by selling their collected products to traders when compared to contractors. To gain higher a higher profit for collection, it was suggested that the most important MFPs can be brought under the umbrella of regulated markets.
Tribal and Forest Right

- Forests fulfil major needs of the tribal. But people residing near the forest areas and National Parks and Sanctuaries, face threats and harassment due to many reasons. In most of the cases tribal residing near/in the forest areas do not have security of land and other subsistence rights and people live inconstant threat of getting evicted. Settlement of rights like the grazing rights and right to movement are not very well defined. As a result, conflict occurs between the villagers and forest officials. There has to be a comprehensive legal / constitutional solution for the problems facing the tribe such that they will have peaceful and productive life in the forests which were their ancestor’s place of living.

- When forest land is cultivated by the tribal’s they consider this land as their own traditional land and a source of sustenance. But on the other hand the Forest Department considers them as “encroachers”. Since laws and rules are not very clearly spelt out, confrontations arise, between the forest officials and the villagers. This problem can be solved by identifying some specific measures like: (a) NGOs can be selected who have a good track record and experience in handling the forest related issues in a participatory manner; (b) Women SHGs / Village committee can be set up who would have the responsibility to protect the forest from over exploitation. Since forest produces are used by all, each family residing near the forest should be its member; (c) the concept of Joint Forest management (JFM) /Participatory Forest Management (PFM) can be introduced with the help of forest officials; (d) Forest officials can be sensitized towards the needs, traditional and customary rights of the tribal along with the possible mechanism to handle the sensitive issues like land right, and forest right; and (e) linkage with other government programmes should be made so that people can avail the facilities of good housing, education, health
facilities and income generation so that livelihood would not remain dependant solely on forest.

- Resource mapping can be done to locate the total forest area in the vicinity and accordingly, compartmental arrangements can be made to use the forest on section basis. To avoid conflict between forest officials and forest dwellers, information regarding their rights, grazing land and collectable products can be displayed in the village; and grazing land can be demarcated. The concept of social fencing can also be introduced.

- The forest products are considered not only as the major source of income but also fulfil the daily needs of fuel and fodder. Generally these products are collected by women. Thus, with the shortage in biomass products and environmental degradation, it not only increases the time which is spent in collection but it effects the livelihood system and health because when collection is less, it leads to decreased consumption and sale of goods and lesser time to be spent for other activities like agriculture. Therefore, to protect the forest from overuse and to lessen the dependability of women on forest, wasteland development can be initiated. Community land and wasteland is usually available in the tribal areas. So, this land can be developed as an income generating unit as well. In this district, and in tribal settlements, women should be actively involved and they should be trained on land preparation, plantation, protection, maintenance and benefit sharing.