6. SUMMARY

Studies were carried out to generate information on the nature and type of FDA activities and other schemes operated in the study FDA divisions and their impact on socio-economic status of tribal households coupled with factors governing the influences of tribal participation in FDA activities. This besides, the study also has come out with suggestions and policy guidelines for augmenting the FDA activities. A quintessence of the findings is reported herein.

6.1. NATURE AND TYPE OF PROGRAMS IMPLEMENTED BY THE FDAs

The study was conducted in three FDAs viz., Anamalai, Coimbatore (Western Zone) and The Nilgiris (hilly zone). The FDAs implemented seven programs, six major schemes of centrally sponsored projects and the multifarious activities of the line departments. The FDA activities were implemented with the budget outlay of Rs.445.17 lakhs against the sanctioned outlay of Rs.779.49 lakhs. The study found that only 57 per cent of the total sanctioned outlay was released which indicated the delay and non release of funds to complete the works envisaged.

6.1.1 Approved components

The activities of FDA program included ANR, bamboo plantation, mixed plantation, EPA, fencing and preparation of micro plan, soil and moisture conservation and other maintenance works of NAP.

6.1.1.1 Achievements made under NAP

(i) Among the approved components of NAP scheme, the ANR was found to be the major task with 1590 ha with the funding support of 142.97 lakhs for the western zone. In the hilly zone, 420 ha was to be treated with an outlay of Rs.39.40 lakhs. Next to the ANR, the Mixed Plantation component attracted higher outlay of
Rs.112.56 lakhs in respect of western zone and the hilly zone accounted to be Rs.68.76 lakhs only. The EPAs accounted to 67.15 per cent of financial allocation in respect of Western Zone and 32.85 per cent in the case of Hilly zone.

(ii) The FDAs in Western Zone treated the forest area of 3741 ha which accounts to 2.26 per cent of the area; on the other hand the hilly zone treated only 1.98 per cent to the total area under forest cover. In Coimbatore FDA, the treated area was 4836 ha utilizing an amount of Rs. 378.33 lakhs accounting for 48.54 per cent to the total sanction.

6.1.1.2 FDA activities and assets created

Asset creation was another major activity of FDA where 581 assets were created in western zone which was not evidenced in the hilly zone. The soil and moisture conservation activities were executed to the tune of 86 per cent in western zone and 79 per cent in the hilly zone with an expenditure of Rs.86.71 lakhs and Rs.2.92 lakhs respectively for the two zones.

Among the centrally sponsored schemes, the WGDP was implemented in western zone and HADP in hilly zone. The WGDP and HADP generated 30.38 and 21.25 per cent of employment opportunities. The CFC generated 297407 man days of employment. It is observed that the centrally sponsored schemes generated enough employment opportunities through the influence of the FDA.

The construction of group houses played a major role in asset creation in Coimbatore FDA, which accounted 49.04 per cent of the total asset created, followed by the construction of class rooms (12.50 per cent). This besides, improvement works done to the existing kutcha houses accounted to 9.62 per cent. The PMGY scheme executed through DRDA contributed 50 per cent of assets created. These assets included facilities in school building, battery operated vehicle, check dams, mini bus, tractor with trailer,
bore well with motor, Solar Water Pump and Solar Lights and all together accounted for 20.45 per cent to the total assets created. In Coimbatore FDA as a whole, the man days generated from all line department activities was 519643.

In Anamalai FDA, 100 group houses were constructed through SGRY Scheme which accounted for 62 per cent of the total works. Among the line department activities, SGRY alone contributed 88 per cent.

The capacity building program conducted in CFC indicated that the Coimbatore FDA alone excelled in the capacity building activities. Other FDAs like Anamalai initiated only one type of training to the Presidents of VFC and its members on Afforestation. The Nilgiris FDA did not make any attempt to train the stakeholders.

In holistic perspective, it is observed that wide range of schemes directly by FDA and indirectly through centrally sponsored program and other line departments were implemented which resulted in augmenting natural regeneration, enhancement of mixed plantation species and other developmental works in the form of entry point activities and generated improvement in the forest ecosystem.

6.2. IMPACT OF FDAs ON SOCIO-ECONOMIC STATUS OF THE TRIBAL HOUSEHOLDS

6.2.1 Social impact

(i) Among the 15 tribal districts in Tamil Nadu, The Nilgiris shared 3.72 per cent of the total tribal population of Tamil Nadu and stood first followed by Salem and Namakkal district (each 3.45 per cent). Since CFC constitutes 3 FDAs including The Nilgiris, the share of the tribal population increased to 4.40 per cent to the total tribal population. This population is higher than the total tribal population in the state (1.70). The implementation of FDA activities created enough socio-economic impact. The social indicators viz., population status, age group, size of
land holding, literacy, infrastructure facilities available, gender participation, health and hygienic status were studied. Similarly economic indicators like income and employment generation were studied.

(ii) The tribal population per village was found to be almost equal in both the agroclimatic zones viz., 49.34 (Western Zone) and 48.40 per cent (Hilly Zone). Among the population, the SC was found to be more per village. Their respective share was found to be 41.48 per cent (SC) and 31.96 per cent (ST) to the total population.

(iii) The age group study found that the CFC had 51 per cent of households under the middle age followed by 42 per cent (Young Age) and only seven per cent households under the old age category. The family size indicated that the Group I (less than 3 family members) showed a decrease in the number of households between 2002 and 2007. There was marginal increase in respect of Group II (3 to 5 family members) and Group III households (more than 5 family members). In all the three FDAs, the average size of the family was around four members.

(iv) It is found that the middle age (54 per cent) category of households in CFC was much aware as members of VFCs followed by young age (42 per cent) category. Among the FDAs, 93 per cent of the households of Coimbatore FDA was found aware as members of VFCs followed by Anamalai FDA and The Nilgiris FDA.

(v) With regard to the land holding, most of the sample households were only marginal category accounting for 53.67 per cent to the total sample households. The households who did not own any land was accounted to 39.33 per cent. The small and medium category of farm were found to be very less and the large farm category found to be almost nil in the study environ. The average size of land holdings in Coimbatore FDA was 1.15 ha followed by Anamalai (0.54 ha) and the Nilgiris by 0.39 ha. The CFC had the average size of land holding of 0.70 ha per household.

(vi) The tribal households were actively involved in crop cultivation for their livelihood sustenance. The major crops are paddy, ragi, sorghum and minor millets. Banana
cultivation could also be seen in certain tribal pockets particularly in Coimbatore FDA. The cropping intensity was more than 100 per cent in all FDAs.

(vii) The illiteracy percentage slashed from 35 per cent to 32 per cent in CFC. The change in the functional literate was accounted to be 45.45 per cent increase over the base year (2002).

(viii) Transformation of kutch houses into pucca houses was to the tune of 32.94 per cent in CFC. The FDA wise analysis revealed that no such construction was visible in Anamalai FDA. The Coimbatore FDA alone had a remarkable and noticeable achievement in respect of establishment of Pucca houses followed by The Nilgiris FDA.

(ix) The electricity connection to the houses of FDA villages increased remarkably from 41 to 49 per cent in Anamalai FDA, 66 to 92 per cent in Coimbatore FDA and 78 to 87 per cent in The Nilgiris FDA.

(x) The participation of the tribes in VFCs revealed that the western zone had the presidents from male category alone. As per the NAP guidelines women member should be elected as VFC president at least once in three year. Such practice of electing the women member was found to be ignored in western zone. The hilly zone elected the female member as presidents which accounted for 15 per cent to the total. In respect of CFC, the percentage share of female presidents to the total was found to be only 4.60 per cent. In respect of presidents of VFCs / EDCs, the western zone showed 77.01 per cent while the hilly zone showed only 22.99 per cent.

(xi) The western zone had 51.57 per cent of VFC members, followed by the hilly zone with 48.43 per cent to the total members enrolled in CFC. In absolute terms, male and female members were found enrolled almost equally in the hilly zone. However, western zone had 55.40 per cent of male members and 48.13 per cent women members. In respect to the Executive Body, there were 421 VFC members in CFC in which the western zone had 281 members (66.75 per cent). However, the
hilly zone had only 140 VFC members which accounted to 33.25 per cent to the total. Sex wise composition revealed the dominance of male VFC members both in western and hilly zone.

(xii) With respect to the number of meetings organized in Coimbatore FDA; general body meetings were conducted thrice between 2002 and 2007. In Anamalai FDA, only three meetings were conducted. The Western Zone conducted only 50 per cent of General body meetings and 75 per cent of the Executive Body meeting. The percentage of deviation in conduct of General Body and Executive Body meeting was arrived at 57.14 and 14.29 in western zone; and Cent per cent and 33.33 per cent respectively in hilly zone. As far as the CFC is concerned, the percentage of deviation of General Body Meeting and Executive Body Meeting was 40 per cent and 20 per cent respectively.

(xiii) As far as women members opting and occupying the positions as presidents of VFCs/EDCs, only 2.94 per cent of women members in western zone and 15 per cent in the hilly zone. The study area as a whole had only 4.60 per cent of women as presidents in the VFCs / EDCs. The other norms such as election of women members as presidents at least once in three years; change of presidents after one year term; appointment of treasurer from members of VFCs / EDCs and operation of bank account by Treasurer and Member Secretary were not practiced in all three FDAs of CFC.

(xiv) The percentage increase in the women member participation in the CFC was found to be around 40 per cent increase over the base year. The participation of male members accounted only for 16.67 per cent increase over the base year 2002.

(xv) The migration studies found that among the FDAs, Coimbatore FDA experienced the highest number of temporary migration followed by Anamalai FDA. The purpose for which the migration performed was found to be education and employment. It was learnt that the migration was a temporary one.
Among the FDAs, the western zone experienced with higher number of community assets in which Coimbatore FDA had the highest share during 2007. The CFC experienced with 87 per cent changes in the community assets over the 2002 situation. Among the community assets established, the construction of group houses, establishment of school buildings, providing drinking water and irrigation facility for sustenance of agricultural activity and provision of street lights with solar power were found to be the most essential and these assets were established in the study environment.

Around 77 per cent of the households were travelling to avail the medical facilities in the study circle. Percentage reductions in number of households who travelled to avail the medical facilities were found to be 23 per cent. This was mainly due to the conduct of periodic health camps at the tribal environment.

Considering the impact on sociological indicators, considerable improvement in all factors assessed were evident due to the influences of FDA and the impact was more pronounced in Coimbatore FDA followed by Anamalai and The Nilgiris.

6.2.2 Economic impact

Compared to 2002 situation, significant improvement in income and employment generation was evident after implementation of the various programs and activities at the instance of the FDA. The income and employment generation activities were carried out through agriculture, livestock, NTFP collection and other wage labor programmes.

(i) The percentage of households involved in agriculture was around 23 followed by livestock (7 per cent). The percentage contribution of employment by forestry activity was 37 per cent. Though it appeared to be increasing in actual terms, the percentage contribution towards employment was not appreciable at 2007 situation.

(ii) The livestock was found to be increased to the level of 33 per cent. Among various categories of animals, the population of cow was found to be reduced remarkably to a
level of 66.67 per cent followed by work animals (33 per cent). However, the population of sheep was found to be on the increase at 120 per cent over 2002 situation.

(iii) With regard to employment generation, the total man days generated in CFC during the study period was 164 man days per annum and the increase was only 25 per cent from the base year (2002).

(iv) The income generation study found that the gross income generated from all sources was found to be at Rs 16489 per annum in Coimbatore FDA followed by The Nilgiris FDA (Rs 12215) and Anamalai FDA (Rs. 11348).

(v) The sample households present in CFC experienced the income distribution almost equal among all the households. The Gini Concentration Ratio was arrived at 0.27 (2002) and 0.23 (2007) in CFC revealing reduction in the inequality.

(vi) As far as the consumption of food and the related calorie level is concerned it is found that the households in all three FDAs consumed below the level (2400 calories) recommended by NIN, Hyderabad. Among the FDAs households, the highest calorie consumption was evident in Coimbatore FDA (2350 calories) followed by Anamalai (2223 Calories) and The Nilgiris (2234 calories) which suggests the improvement of consumption pattern through introduction of new heath schemes in the study FDAs.

(vii) The FDA and other related schemes created significant impact and transformed Below Poverty Line (BPL) into Above Poverty Line (APL). The number of households increased from BPL to APL was estimated at 121 with an improvement of 53 per cent from the base year (2002). The absolute income increase was Rs 15348 (APL) from Rs 10176 (BPL) in CFC. In overall perspective there exists transformation from BPL to APL.

6.3. FACTORS INFLUENCING PARTICIPATION OF TRIBES IN FDA ACTIVITIES

It is evident that the fodder, fuelwood and NTFP collection are the major factors which influenced the participation of tribes in FDA activities.
6.3.1 Fodder Collection

The frequency of fodder collection among sample households was predominantly twice a week and once in a week accounting for 68.42 per cent and 40.74 per cent increase over the base year (2002), respectively. The frequency of once in a fortnight was also increased to a level of 300 per cent over the base year. The number of households involved in fodder collection increased to 56 per cent in western zone and 51 per cent in hilly zone. There was not much change in the number of animals owned by the household. The distance travelled to collect fodder was also reduced during 2007 situation.

6.3.2 Fuel wood Collection

Similar trend was also observed in fuel wood collection in CFC, wherein twice a week collection was dominant followed by once in a week. The frequency of the fuel wood collection twice a week faced marginal reduction (2.68 per cent) and the frequency of once in a week faced marginal increase (5 per cent) over the base year. The frequency of once in a fortnight fuel wood collection increased to the level of 166 per cent over the base year. The everyday fuel wood collection was reduced to 77 per cent, compared to base year which indicated the shift in collection pattern due to the alternate employment opportunities. The quantity of fuel wood collection was accounted to be 5 to 6 kg per visit. In the overall assessment the fuel wood quantity collected has increased and the distance travelled to collect found decreased. It was found that family size, number of trips and the distance travelled are the major factors influenced the fuel wood collection.

6.3.3 NTFP Collection

The collection and sale of NTFPs played significant role in tribal livelihood. The major NTFPs collected by the forest dwellers are *Terminalia chebula*, *Sapindus emarginatus*, and *Acacia coincinna*. The study on NTFPs collection and marketing found paradigm shift in the system. During 2002, the NTFPs were sold to the contractors through open public
auction and after the introduction of FDA the NTFP lease units were allotted freely to the tribes. The NTFP collection was influenced by the following factors viz., size of the family, distance travelled, number of man days per annum, distance from the tribal village to the market and the condition of the forest.

6.3.4 Constraints Faced by the Households in Different Activities.

The sample households in CFC faced certain constraints in income and employment generation activities. These constraints included damage by wild animal, theft, smaller size of the land holding, small grazing area, lack of veterinary care, high input price, lack of market facility and uncertain market and trade. This besides, low wage rate and lack of technologies for sustainable collection, processing and value addition of NTFPs are also identified as constraints.

6.4. POLICY OPTIONS FOR SUSTAINABILITY OF FDAs : RECOMMENDATIONS

The study thoroughly examined the existing FDA activities and identified the key issues which could be resolved only through additional guidelines and necessary policy options and the study recommends the following to the policy makers and planners.

(i) Necessary policy changes for integration of FDA micro plan in the working plan; extending concessions on PDS; provision for employment as watcher, mali and mahouts; augmenting MGNREGA scheme to tribes from 100 days to 200 days; creation of tribal schools in every settlement.

(ii) It is recommended to entrust all the forestry schemes under one umbrella and to implement it through a single JFMC.

(iii) It is suggested to create consortium of JFMCs federation in order to create institutional mechanism.
(iv) Necessary capacity building programs for sustainable collection, processing and value addition of NTFPs coupled with precision technologies on agriculture and horticultural crops.

(v) Implementation of Innovation projects to create value chain management in industrial agroforestry, honey, medicine and aromatic plants, wild fruits and biomass based power generation.

Taking a holistic view, the current study found that wide range of schemes and activities were implemented through FDA and these schemes have generated socio economic impact, besides augmenting the forest restoration process in a positive and needed way and recommends necessary policy changes for enhanced people participation towards realizing sustainable forest management.