LIVELIHOOD SUPPORT FOR TRIBAL POPULATION IN KERALA THROUGH PLANNED ASSISTANCE: AN EVALUATION OF THE TRIBAL SUB PLAN (TSP) IN THE AGRICULTURAL SECTOR

By

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THESIS

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DECLARATION

I, hereby declare that the thesis entitled **"Livelihood support for tribal population in Kerala through planned assistance: An evaluation of the Tribal Sub Plan(TSP) in the agricultural sector"** is a bonafide record of research done by me during the course of research and that it has not previously formed the basis for the award to me of any degree, diploma, fellowship or other similar title, of any other University or Society.

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Certified that this thesis entitled **"Livelihood support for tribal population in Kerala through planned assistance: An evaluation of the Tribal Sub Plan(TSP) in the agricultural sector"** is a record of research work done independently by **Arya Krishna K. G.(2017-11-112)** under my guidance and supervision and that it has not previously formed the basis for the award of any degree, diploma, fellowship or associateship to her.

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AFFECTIONATELY DEDICATED TO

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INTRODUCTION

Tribal people in India constitute a significant segment of Indian population. The Scheduled Tribes population of the country has been 84.33 million, constituting 8.8 per cent of the total population of the country with 91.7 per cent of them living in rural and 8.3 per cent are in urban areas (COI, 2011). Indian tribals possess a significant degree of cultural and ethnic diversity. At present, there are six hundred and ninety-seven tribes as notified by the Central Government (Singh, 1996). They are all distinct and differ each other in terms of socio-economic status as well as behavioral patterns.

1.1 Profile of the Scheduled Tribes

The socio-economic indicators of Indian tribal population are detailed in Table 1.1.

Table 1.1: Important Socio-Economic Indicators of ST Population in India

Socio-economic indicators	**Scheduled Tribe population (%)**
Population	8.2
Rural population	91.2
Urban population	8.8
Sex Ratio	978
Total Fertility Rate	3.06
Male literacy	59.17
Female literacy	34.76
Infant Mortality	84.2
Child mortality	46.3
Households with access to drinking water	28.2

Households with Pucca houses	24.4
Work participation rate	49.1
Agricultural labourers	36.9

Source: COI, 2011

The Scheduled Tribes have been specified, as per Article 342 of the Constitution, in all states and union territories except Chandigarh, Delhi, Haryana, Pondicherry and Punjab (Roy, 1994). About 80 per cent of tribal population are found along the central belt, starting from Gujarat – Maharashtra, running through Rajasthan, Madhya Pradesh, Chhattisgarh, Orissa, Jharkhand and West Bengal. The rest 20 per cent population are in the North-Eastern states, Southern states and Island groups. Tribal Sub Plans have been in operation in 22 states and two Union Territories, i.e. in all states except the tribal majority states of Arunachal Pradesh, Meghalaya, Mizoram and Nagaland and in the Union Territories of Lakshadweep and Dadra and Nagar Haveli. The states which had 50 per cent of the Tribal population were cited under the Tribal Sub Plan. Sixteen states and two Union Territories were included in the plan during the Fifth Plan period. Under the plan almost 65% of the Tribal areas in India were covered (Kumar, 1998).

Singh (1996) described that the numerically strong scheduled tribe groups include Santhal, Gond, Bhil, Oraon and the smaller tribal groups are to be found in Andaman &Nicobar Islands (Andamanese, Onges) and Kerala –Tamil Nadu (Paniyans and Kattunaickens). These and other smaller groups numbering 75 in the country have been categorized as primitive tribal groups for special development assistance. The distribution of tribal population across the states and union territories of India is given in Table 1.2.

Table 1.2: Number of Scheduled tribes or group of tribes notified in states and union territories

Sl.no.	State/Union territory	No. of scheduled tribes
1.	Andhra Pradesh	33
2.	Arunachal Pradesh	12
3.	Assam	14
4.	Bihar	30
5.	Goa	5
6.	Gujarat	29
7.	Himachal Pradesh	8
8.	Jammu & Kashmir	8
9.	Karnataka	49
10.	Kerala	35
11.	Madhya Pradesh	46
12.	Maharashtra	47
13.	Manipur	29
14.	Meghalaya	17
15.	Mizoram	14
16.	Nagaland	5
17.	Orissa	62
18.	Rajasthan	12
19.	Sikkim	2
20.	Tamil Nadu	36
21.	Tripura	19
Union Territories		
1.	Andaman & Nicobar Islands	6
2.	Dadra & Nagar haveli	7
3.	Daman & Diu	5
4.	Lakshadweep	*

*Inhabitants of Lakshadweep and those who were born in Lakshadweep have been treated as Scheduled Tribes.

Source: NCW, 2006.

1.2 Evolution of the Tribal Sub Plan (TSP)

Though the government of India had initiated programs with the ultimate aim of balanced growth and development of people of this country, Scheduled Tribes were noticed to be behind the

mainstream and were only sparsely exposed to the development process. Thakur (1995) while narrating the socio-economic status of the tribal population in India observed that even after 25 years of independence, and successful completion of four five year and three annual plans, it was realized by policy makers that the Scheduled Tribes are still way behind the mainstream development process.

Apart from this, it was realized that the general plan schemes and programmes designed for the overall development of the economy hardly improved their socio-economic status. According to Menon (2000), the benefit of such general welfare schemes did not percolate down towards the development of ST population of the country in any significant manner. The persistence of socio-economic backwardness of the STs, in spite of the development efforts, warranted a special and focused strategy, to enable them to share the benefits of overall economic growth in a more equitable manner.

It was in this context the Ministry of Education and Social Welfare, Govt. of India, set up an expert committee in 1972 under the Chairmanship of Prof. S.C. Dube to recommend strategies and programmes for the overall development of scheduled tribes. This committee suggested the introduction of Tribal sub-plan from 1974-79. This plan continued since then and has become the major policy strategy for upliftment of the tribal population of India.

As seen just above, systematic tribal development planning began in 1975. This had been acclaimed as an organized phase of government's interaction to improve the socio-economic status of tribal people. The NCST (2007), had observed that although considerable administrative initiation had been taken since 1952, organized endeavors were launched only after 1973 as this was the year of envisagement of tribal sub-plan by government of India. The primary necessities of the tribals such as (1) Food (2) Shelter (3) Clothing and (4) Drinking Water supply; protection of the rights over the resources (forest minerals, rivers (water) & lands etc.) were taken into consideration. Sub- Plan was framed in a manner to improve the standard life of the tribal communities. Answering the main issues faced by the tribal communities was the basic philosophy for such an integrated tribal development.

According to Menon (2000), the main objectives of Tribal Sub Plan are socio-economic development of the tribal population, protection of tribals from all sorts of injustice and exploitation and to see that the poorest of the poor tribal cross poverty line so that the gap between the tribals and non-tribals are bridged considerably. These objectives are planned to be accomplished and adopting specific strategies on devising exclusive programmes. These programmes under the TSP included identification of remote tribal areas, demarcation of the regions, identification of cultural barriers, promoting change, assessment of the tribal population, assessment of requirement of funds provided for tribals.

1.3 Norms followed for the constitution of tribal sub-plan area

However, it was decided that the tribal areas where the total tribal population is more than 80 per cent in states like Arunachal Pradesh, Meghalaya, Mizoram and Nagaland, the TSP concept would not be applicable. The basic element in the TSP strategy is to identify the areas of tribal concentration and to setup Integrated Tribal Development Projects (ITDPs) for such areas. The ITDPs are the operational units for translating the strategy into practice in the field. Each ITDP consists of a block or a group of blocks where the ST population is more than 50 per cent of the population. In addition, the ITDP's Modified Area Development Approach is adopted to cover smaller areas of tribal concentration covering 10,000 population of which 50 per cent are tribals. Tribal clusters have also been formed in such groups of villages where the population is 5,000 and tribals constitute more than 50 per cent.

Despite the enactment of progressive legislations that empower tribal communities to govern themselves through their own institutions, the main thrust of tribal development policy continues to be that of the Integrated Tribal Development Programme (ITDP) through Tribal Sub Plans. According to Singh (1996), the main aim of the ITDP is to bring the fruits of development to tribal areas.

1.4 Implementation of Tribal Sub Plan in Kerala

As stated earlier, implementation of TSP was adopted in line with the decision of the Government of India. Following this, TSP approach was initiated in Kerala to intensify the tribal development programme of the state. According to Nair (1985), the idea of formulating separate tribal sub-plan for tribal areas, suggested by the Government of India and was implemented in Kerala from 1976 onwards. GOK (1985) details that all development blocks with more than 50 per cent tribal concentration were identified and special plans were prepared for them. Accordingly, five geographical regions with considerable concentration of tribal population were identified and declared as sub-plan areas and special projects (Integrated Tribal Development Projects) were prepared for them. These projects were later revised to cover the dispersed tribal population around these areas. Implementation of TSP in Kerala has undergone several changes in terms of administrative setup. With the introduction of decentralized planning, during the ninth five-year plan, formulation of TSP programmes was made more participatory.

Under Tribal Sub Plan, there are several programmes that are designed and implemented exclusively for tribal population. In Kerala, the following are the major interventions made under TSP.

- ***Assistance to Tribal Welfare Institutions***

The objective of this scheme is to provide grant/ assistance to:

- Priyadarshini Tea Estate, Mananthavady.
- Attappady Co-operative Farming Society.
- Ambedkar Memorial Rural Institute for Development (AMRID), Kalpetta, Wayanad.
- Running expenses of High School run by the Attappady Co-operative Farming Society and Tribal Hostel at Chindakky.
- Renovation of Tribal societies functioning in sectors like Agriculture, Coir, and other traditional sectors. Projects aimed at employment and income generation activities of tribal societies are given assistance.

- ***NRLM (National Rural Livelihood Mission)-TSP***

The centrally sponsored scheme envisages establishing a large number of micro enterprises in the rural areas. The provision is earmarked to the Block Panchayats. The Nodal Agency is Kudumbasree Mission.

- ***Grant-in-aid to the Kerala State Federation of SCs and STs Development Co-operative Ltd.***

Government of India gives grant in aid to the Kerala State Federation of SCs and STs Development Co-operative Ltd for Minor Forest Produce Operations. The grant includes:

- Share capital investment
- Procurement of MFP
- Construction of godowns/ware houses.

However, it is generally observed that implementation of TSP projects is constrained by several issues of non-participation, bureaucratic delay and lack of project ideas. Dube (1973) reported that tribal development programmes are likely to run into dead without proper institutional and infrastructural support. This has been stressed by Pratap (1975), Gopalan (1992), Kulandaiswami (1995) and Tripathy (2008).

Being the most marginalized section of the society, welfare measures oriented to the tribals have to be sustainable and self-driven. However, review on the impact of developmental programmes in this sector reveals that Tribal Sub Plan has been not very effective in improving the livelihoods of tribals to the expected extent. Ensuring sustainable livelihood options for tribals require careful planning of development programmes. It has also been observed that implementation has to be participatory and in view of the socio-economic and cultural uniqueness of the tribal population. According to Misra (1977), the real difficulty was that the sophisticated plans could not access the situation from field point of view. He further opined that lack of tribal participation do play a role in getting the unsatisfactory results. Similar observations made by Ray and George (1991) states that while formulating developmental

programmes, various departments do not consider the relevance of the scheme to the area and thereby brings down the involvement of local people in it.

Bringing the tribal counties to maintain economic activity has been observed to be a difficult task, given the varied anthropological traits each community possesses. The observations made by Singh (1982) adds that the approach of aggregating the issues of tribal communities and offering an 'one-size fit' strategy compromises heavily on the effectiveness of developmental policies at the individual tribal community level.

It is in this basic ground this study attempts to explore the implementation of Tribal Sub Plan in Kerala, with the following objectives:

1.5 Objectives

- To outline the changes in the administration of Tribal Sub Plan (TSP) of Kerala since 1976.
- To examine the pattern of outlay and utilization of TSP funds in the agricultural sector in selected Grama Panchayaths during 2015-17 and the livelihood options opened up by TSP projects.
- To assess the socio-economic impact of TSP projects in the agricultural sector.
- To find out the social and institutional constraints in implementing TSP projects.

1.6 Scope of the study

Tribal Sub-Plan (TSP), a strategic policy initiative to secure overall development of the STs, was introduced in order to bring them at par with other sections of society and to protect them from exploitation. Tribals require specific attention not only with monetary allocation but also for their rapid socio-economic development. TSP focuses on reducing gaps between the tribals and non-tribals in health, education, communication and other areas of basic amenities of life by providing legal and administrative support. The Sub-Plan also intends to implement livelihood security schemes to enhance the income of tribals by taking into account their aptitude and skill.

Understanding the effect of Tribal Sub Plan on tribals is essential as this is exclusively meant for the tribal communities. It is important to examine the socio-economic impact of these projects on tribals to find out the efficacy of implementation of the Sub-Plan. The study also intends to check the extent of livelihood options opened up by TSP for tribals. This study not only deals the output of TSP but also goes through different constraints faced by the authorities in executing the TSP programs so that the results can be considered while making further developmental plans for tribals.

1.7 Limitations of the study

The study was conducted properly satisfying all the objectives, but there were certain limitations. Communication with the tribal respondents was the major problem throughout the entire data collection period. Many times, help of a tribal localite was necessary to locate the tribal hamlets and to communicate with the respondents. Remoteness of the tribal hamlets was another limitation. Some tribal communities live in the interiors of the forest, which made collecting data from them very difficult. Access to data on developmental interactions was difficult, at least in some offices, as interactions could not be related to the real time experience of beneficiaries.

1.8 Presentation of the study

The report of the study is presented as five chapters. The first chapter includes a brief introduction, objectives and limitations of the study. The review of literature relevant to the study is cited in the second chapter. The third chapter deals with the materials and methods which were used in measuring the variables and the statistical tools used. The fourth chapter details the results of the study and interpretation of results. Summary and conclusion of the study are included in the fifth chapter followed by appendices and abstract at the end.

Review of Literature

Chapter 2
REVIEW OF LITERATURE

In this chapter an attempt has been made to review the study on "Livelihood support for tribal population in Kerala through planned assistance: An evaluation of the Tribal Sub Plan (TSP) in the agricultural sector''. Relevant studies in this area of research have been chronologically arranged and are presented under the following sub headings.

2.1 Livelihood security of tribal population

2.2 Extent of livelihood security provided by tribal development projects

2.3 Socio-economic impact of tribal development projects

2.4 Perceived efficacy of implementation of TSP projects

2.5 Pattern of outlay and expenditure of TSP funds

2.6 Major physical and financial targets of TSP projects in agriculture

2.7 Awareness on development programmes

2.8 Social and institutional constraints in the implementation of TSP projects

2.9 Extent of participation of tribal people in developmental activities

2.10 Socio-economic status of tribal farmers

2.11 Status of empowerment of tribal farmers

2.12 Status of extension intervention

2.1 Livelihood security of tribal population

Chambers (1988) has determined the risk of livelihood failure as the level of vulnerability of a household to income, food, health and nutritional security.

UNCED (1992) has suggested the idea of sustainable livelihoods as a way to maintain or enhance productivity, secure ownership and access to resources and income generating activities as well as to ensure adequate and sustainable flows of food and cash to meet basic needs.

As defined by Chambers and Conway (1993), a sustainable livelihood is one which can cope with and recover from stress and shocks, maintain and enhance its capabilities and assets and provide sustainable livelihood opportunities for the next generation.

A report by Gadgil (1995) shows that emerging threats of global warming, greenhouse effect etc. results in degradation of natural resources over the time, which indirectly affects the traditional livelihood options of tribals based on the environmental resources.

According to Frankenberger (1996) household livelihood security is the sustainable access to income and resources to meet the basic needs which includes adequate access to food, water, health facilities, educational opportunities, housing and time for community participation and social integration.

Income, production and recognition were recognized as the three aspects of employment by Sen (1999).

2.2 Extent of livelihood security provided by tribal development projects

Dube (1973) reports that livelihood options of majority of the tribal communities mainly depend upon primary sector with very minimal dependence on other avenues of employment. He opines that, there was not much variation in the reported income of tribal communities, but there was

substantial difference in the levels of indebtedness among land owning communities like Kurichya and Kuruma and the backward communities.

GOK (1979) survey report detailed the land affiliated issues faced by tribals and information on the issues faced by tribal agriculturists. It adds that Land alienation, subsistence agriculture mode adopted by the tribal communities and their outdated cultivating technologies were among most important factors that choked the agriculture.

While working on issues related to livelihood sustenance of tribal communities, Burman (1987) observed that decreased Non-Timber Forest Products (NTFP) had adversely affected livelihood sustenance and food basket of a large number of poor tribal households.

Majority of the tribal communities consider primary sector as their major livelihood option, with very minimal dependence on other avenues of employment. (Bijoy, 1999).

The income and livelihood situation of tribal communities in Kerala shows a mixed picture. While some communities like Kattu Naika are still in hunter gatherer stage, other communities who have lost their land to settlers and encroachers work as agricultural or non-agricultural labourers (Varghese, 2002).

Zacharias (2003) concludes that the only employment-generating programme reported to have implemented among 'Kadar' tribe is a Kora Grass-weaving Center started at Kuriarkutty during 1974-1985 periods. This scheme failed due lack of marketing facilities for the product. He reveals that, Panchayat Raj institutions, which were meant for decentralization of administration with popular participation in decision making, has failed to make any impact on Kadars.

Because of the dependence on agriculture and natural resources for livelihood, tribal communities consider formal system of education as a wasteful expenditure of time. Poverty is a significant deterrent to tribal children as they often dropout of school for helping their family in occupation and their families cannot afford the cost of education as they are deprived of economic resources (Praveen, 2009).

At present, most of the tribal people are poorly equipped to make use of the emerging livelihood opportunities. Land and natural resource-based livelihoods are on the decline and tribal people must be suitably equipped work in emerging sectors (TISS, 2015).

According to Hazarika *et al*. (2017) TSP interventions has created a high impact on improving the livelihood status of tribal communities of North-East India.

2.3 Socio economic impact of tribal development projects

Administrative conveniences often force individual community identity to be dwarfed by the collective tribe identity often resulting in the masking of the true nature of stratified development in the tribal community (Singh, 1982).

Bhatt (1982) points out that besides provision for various subsidies, incentives and assistance, lack of public awareness, absence of spirit of TSP and geographical constraints were identified as reasons of poor impact of TSP on Korga community.

The developmental programmes under Tribal Sub Plan have brought about remarkable changes in the socio-cultural life of the tribals. It has resulted in bringing positive changes not only in their food habits and dressing pattern but also in the attitudes of the tribal towards education and immunization of children in the direction of higher quality of life and modernization (Rayappa, 1993).

Efforts started by the Central and State Governments for the formulation of separate development strategies for the development of the scheduled tribes during the fifth five-year plan had only marginal impacts on their socio-economic conditions in spite of various welfare measures and constitutional protection (GOK, 2008).

2.4 Perceived efficacy of implementation of TSP projects

Misra (1977) observed that the real difficulties so far centered round implementation of projects was that the sophisticated plans could not access the situation from field situation point of view. He further opined that the field functionary who link the planning and field operation should be provided with housing, transport and social amenities for ensuring efficiency in extension activities.

Singh (1982) noted that individual community identity was getting dwarfed by the collective tribe identity as forced by the administrative conveniences, often resulting in the masking of the true nature of stratified development in the tribal community. This approach of aggregating the issues of tribal communities and offering one-size fit all policies dovetails the objective of framing policies at the aggregate level and it compromises heavily on the effectiveness of such policies at the individual tribal community level.

According to Jose (1986), the foremost thing required in strengthening the service delivery mechanism in tribal settlements was the harmony between local development planning and the functioning of *oorukoottoms.*

As found out by Ray and George (1991), while formulating developmental programmes, various departments did not consider the relevance of the scheme to the area thereby brings down the involvement of local people in it. There is no procedure in the departments wherein the felt needs are assessed by formulating sectoral schemes. For instance, the supply of utensils and coconut sapplings to the primitive tribes without assessing what schemes would be apt for economic uplift of the tribals.

Nagda (1998) opined that the tribal sub-plan approach which was intended to narrow the gap between the levels of development of tribals and other areas has accelerated the pace of development in the tribal area, yet it has not shown into impact on improving the quality of life, especially in terms of the level of literacy, health conditions, infant mortality, mortality and status of women.

As indicated by Ryser (2000) indigenous leaders throughout the world have expressed the opinion that the World Bank and other international financial institutions, should become more directly involved in providing loans and grants to indigenous populations for their economic development.

The planning and development agencies both at the center and at the state imposed their own methods of development instead of thinking in terms of the group's entitlements, empowerment and participation. This was indicated by Reddy (2000).

Ashley (2001) stated that the most desiring poor sections and backward areas had suffered due to utter neglect by the Government officials engaged in the implementation of poverty alleviation programmes in the tribal areas.

Oorukoottams acted as the vital agencies for formulation and implementation of the TSP projects of the LSGIs and also the schemes of the state, central governments and external agencies (GOK, 2007).

It is observed that most of the tribal projects launched during and after the Fifth Five Year Plan have deviated either from their original objectives or have simply met with catastrophic results (GOK, 2008).

The process of beneficiary selection for most of the schemes is, at present, arbitrary and non-transparent. There is a need to bring beneficiary selection in line with PESA's mandate and involve Gram Sabhas of hamlets as units of selection (TISS, 2015).

2.5 Pattern of outlay and expenditure of TSP funds

According to the report of MoTA (2003) fresh guidelines were issued for release and utilization of Special Central Assistance (SCA) for Tribal Sub-Plan. Under this, tribal population living

below poverty line should alone be covered under SCA-financed activities, with a special emphasis on raising their socio-economic status to that of the rest of the population in the Blocks/District/State. Adherence to the provisions of the Panchayati Raj Act of 1992 and the Provisions of the Panchayats Act of 1996 in planning and implementation of TSP, including the SCA funds, should be ensured in letter and spirit.

MoTA (2003) issued recommendation for release and utilization of SCA for Tribal Sub-Plan with prominent recommendations of tribal population living below poverty line should alone be covered under SCA financed activities, with a special emphasis on raising their socio-economic status to that of the rest of the population in the Blocks/District/State and while formulating SCA-funded TSP activities, priority should be given to the development of the most neglected tribals living in the forest villages.

Annual Report (2009-10) MoTA, GOI stated that though the States are expected to provide TSP funds which are at least equal to the percentage of the tribal population to the total population in the State, but unfortunately not followed by all the states while preparing the annual plan.

A memorandum issued by the GOK (2013) advises the States/UTs to prepare a comprehensive perspective TSP document, taking into account all available sources of funding, to serve as a road map for implementation. Funds available for TSP under Central Sector and Centrally Sponsored Schemes as well as State Plans and Central Plans shall be pooled for the purposes of planning for TSP.

A study conducted by TISS (2015) details about the TSP funding which is dependent on the total income of the state, financial aid given by the Central Government, and other sources such as the World Bank. Having decided the quantum of TSP funds, the Planning Department communicates the amount to the Tribal Development Department which is then distributed to different departments according to the defined norms.

While the TSP budget may be in proportion to the percentage of STs in the population, the absolute amount of TSP expenditure may get adversely affected by mid-year or end-of-year budgetary cuts due to budgetary constraints which can affect developmental projects adversely. So, in view of the special vulnerabilities of the STs, TSP allocations must be insulated from across-the-board budgetary cuts (TISS, 2015).

The allocation of Plan funds to TSP from State Plan outlay is done according to the ratio of population of STs to total population of the State. Out of the total TSP Plan outlay, a certain percentage of funds are earmarked to LGs for implementation of schemes under decentralized planning (GOK, 2016).

Out of the total TSP Plan outlay, a portion of funds are earmarked to Local Self Government Institutions for implementing schemes under decentralized planning based on the ratio of proportion of STs to the total state population (GOK, 2017).

According to PIB (2018), Special Central Assistance to Tribal Sub-Plan is 100% grant from Government of India (since 1977-78), which is charged to Consolidated Fund of India (except grants for North Eastern States, a voted item) and is an additive to State Plan funds and efforts for Tribal Development. SCA grant is utilized for economic development of Integrated Tribal Development Agency (ITDA), Integrated Tribal Development Project (ITDP), Modified Area Development Approach (MADA) Pockets and Clusters, PVTGs and dispersed tribal population.

2.6 Major physical and financial targets of TSP projects in agriculture

In Odisha, Agriculture and Farmer Welfare Department has almost doubled the percentage earmarked in TSP during the period (12% in 2014- 15 and 22% in 2016-17). The TSP earmarking by Rural Development Department has considerably increased in last three financial years (Thakur, 1995).

2.7 Awareness on development programmes

In areas where there was some political awareness among the tribal's, or they had conscious political leadership, it is comparatively easy to convey the schemes and programmes and they could be properly implemented (Rayappa, 1993).

A study by Baiju (2011) concludes that Local Self Government Institutions (LSGIs) and development departments have limitations in spreading the awareness on development schemes in the interior and remote settlements whereas the *oorukoottams* and the tribal leaders can take the initiative through the local dialect, indigenous cultural shows and dissemination of success stories.

State Governments shall take initiatives to generate awareness among the general public about the schemes to be implemented/being implemented for the development of STs by the different departments through electronic and print media (GOK, 2013).

Patel (2014) states that the local educational institutions, panchayats and the voluntary agencies should be adequately involved by the project officials in undertaking awareness drives in tribal villages regarding the benefit schemes.

2.8 Social and institutional constraints in the implementation of TSP projects

Dube (1973) reported that programmes of tribal development are likely to run into dead and without institutional and infrastructural support. This has been stressed by Pratap (1975), Gopalan (1992), Kulandaiswami (1995), Hassen (2006) and Tripathy (2008).

GOK report (1977) points out the plight of the tribal communities in Attappady, discussing the insufficient reach of tribal development policies. The report mentions that tribal households who are unaware of the welfare schemes offered by the Government are forced to live in economic decrepitude. The policies specifically made for the tribal development block were found to be

ineffectively employed as one can understand from the differences in allocated and actual expenditure under various heads and the number of tribal households who benefitted from the programmes.

As reported by Tondon (1988) assets belonging to the Kond tribals of Ganjan district of Orissa (their land, animals, utensils and fruit trees) had been mortgaged to the non-tribals and liquor merchants in lieu of small loans taken by their fathers.

Problems of tribal families in agriculture were low price and fluctuation of price for farm produce, high cost of inputs, inadequate and high wage for labourers during peak season, difficulty in loan repayment, paucity of credit facilities, lack of transport facilities and non-availability and insufficiency of inputs in time as inferred by Manjula (1991).

Rayappa (1993) explained that ignorance, illiteracy, superstitions and tradition oriented are often the factors which obstruct the acceptance of schemes by the tribals.

Major constraints for tribal development were lack of credit institution, poor infrastructure facility, lack of communication facility, non-availability of credit, lack of technical guidance, low agricultural production and poor technology as observed by Ramu (1997).

Implementation of development programmes among the tribal groups in Andaman and Nicobar Islands were found to be difficult because of their hostile behaviour, remote habitation, poor transport facilities, nomadic or semi-nomadic way of life, unaware of the civilized lifestyle etc., as indicated by Kumar (1998).

It·was given by the World Bank Report (1998), that just over 40 years, the vast majority of tribal people had lost their ancestral land and turned into impoverished labourers exploited by all.

Findings of Vidyarthi (1999) says that with introduction of Rural Land Ceiling Act, Tribal Land Transfer Act etc., the non-tribal men often marry tribal women to purchase land from tribal poor

to avoid legal complications or derive financial benefits received from Government but deny tribal women their position as wives.

It was reported by Ramji and Bhatnagar (2000) that Large Scale Multi-Purpose Society or State Tribal Development Cooperative Corporations have not undertaken much viable operations as they have failed to develop any sustainable strategy to deal with the Non-wood Forest Produce markets due to poor leadership, bureaucratized functioning, malpractices and lack of commercial skills.

Among the various constraints of tribal farmers studied, Selvarani (2000) brought out remoteness of farms was as the major constraint, followed by poor quality of inputs available in the market. She pointed out non-availability of extension service as the major extension constraint, followed by lack of training and lack of technical guidance.

Institutional constraints derived by Seema (2002) includes non-availability of adequate inputs in time, inaccessibility of officials, lack of adequate follow up by officials, lack of awareness of the schemes due to inadequate appraisal by officials and the administrative formalities.

Lack of transparency is the main issue associated with the services related to welfare measures for the scheduled tribes. Many of those who deserve assistance are sidelined in the process. Elected ward members and *oorukoottam* leaders are often subjected to pressures to yield individual requests (Ommen, 2009).

A study by TISS (2015) in Maharashtra finds out that the constraints of manpower and lack of technical competence creates problems in selection of beneficiaries, implementation bottlenecks, and lack of effective monitoring.

2.9 Extent of participation of tribal people in developmental activities

Narayana (1985) concludes that developmental and welfare schemes had been gainfully utilized by the tribals. Tribal households got subsidized financial assistance for digging and developing

irrigation well under Small Farmer's Development Agency or Integrated Rural Development Programme.

Recommendations were made by NSMARDP (1985) that planning of research and development in agriculture should have combined contributions of farmers, extension personnel and the scientists.

Respondents gave the following suggestions to improve their participation in agricultural development schemes as organizing crash programmes of training with a consideration to work area, operating schemes appropriate to work area, establishing organised forum for farmers, as reported by Ganesan (1989).

According to Roy and Babul (1994) local people of north-east were not informed or involved while launching the scheme against 'jhum cultivation'. It was suggested that, it is an impossible task to achieve success without the active· participation of the people concerned.

As reported by Udayakumar (1998), participants prepared need-based action plans for their respective villages in which they suggested that majority of their objectives could be achieved only by the initiatives of the village panchayath.

Jamatia (2000) reported that majority of the tribal women were aware of the development programmes implemented by the Governments. They have participated in the Government development· programmes like Tribal Welfare Scheme, IRDP, ADP, Animal Husbandry and Fishery Development Programme either as a member of the beneficiary family or directly as a beneficiary concern.

Marimuthu (2001) found out that a vast majority of the tribal respondents had medium level of participation in developmental programmes.

Tribal sub-plan mechanism involving area specific development and special schemes for numerically small and economically and socially more marginalized vulnerable groups has made much headway (Ministry of Tribal Affairs, 2003).

The Malayarayan community in Kerala can be considered the most developed among all tribal communities in Kerala, owing to their educational attainment, land holding, participation in governance initiatives etc. The land holding capacity of the community is relatively high compared to other adivasi communities and income generation from agriculture is also high among the community (Joseph, 2004).

According to Ommen (2009) in respect to the functioning of *oorukoottam*, the involvement of gramasabha, tribal extension leaders and tribal promoters should be ensured in the discussion on project formulation and implementation. More participation of tribal households in designing of projects/ schemes catching up with the felt needs of the different tribal settlements should also be assured.

TSP is intended to be a participatory plan. Hence strict application of percentages result in a system of command and control rather than one of need-based planning, which should be avoided (TISS, 2015).

2.10 Socio-economic status of tribal farmers

2.10.1 Age

The study conducted by Sripal (1983) indicated that above one-third of the tribes in kerala are middle aged and nearly two-fifth of them belongs to young age group.

Siva (1994) founded that more than 50.00 per cent of the tribal respondents belonged to age group of 36 to 45.

Many of Alukurumba tribal respondents were middle aged between 31-45 years, followed by 28.90 per cent in 46-60 years category, 7.80 per cent below 30 years and 6.70 per cent more than 61 years of age, as pointed by Ramu (1997).

As observed by Jamatia (1999) 44.00 per cent of the tribal farm women were in the middle age group, followed by 31.33 and 24.67 per cent of the tribal farm women belonged to young and old age categories respectively.

Lakshmana (2000) studied that 45.00 per cent of the respondents belonged to old age group followed by 38.33 per cent in the middle age group and young age group (16.67 per cent).

Marimuthu (2001) reported that many of the tribal respondents were from young age group (40.00 per cent) and 26.19 per cent and 33.81 per cent were from middle and old age groups; respectively.

2.10.2 Gender

Jamatia (1999) observed that gender equality among tribal groups is a complex phenomenon that needs to be addressed in the context of various issues of tribal life. He also noted that gender dimension of tribal communities of India has a bearing on the need for tribal development.

2.10.3 Educational status

According to Tondan (1988) educational level and awareness of the tribals are low and they fall prey to the exploitative practices of traders, shopkeepers, money lenders. He added that, educational institutions need to be opened up for them.

A study by Rath (1994) shows that low literacy rate of 3.30 per cent was observed among the primitive abhujmaria tribe of Madhya Pradesh. Among the males,51.60 per cent were found to be literate against 19.40 per cent females. A similar literacy trend was observed among the polyandrous Jaunsaris of Dehradun females. Kora females of Midnapur district, West Bengal had

a very low literacy level of 2.66 per cent. The female literacy rate among the Dudh Khana tribal group of Sundargarh district, Orissa was found to be much higher i.e., 41.00 per cent.

Siva (1994) noted that 68.00 per cent of the tribal respondents were illiterates and the remaining 32.00 per cent were primary and secondary grade literates.

Kumar (1998) reported that cent per cent of Onge respondents were totally illiterate. For centuries, they were living as semi nomadic in the forest of Andaman without any script of their language.

According to the report by Nagda (1998), the school drop-out problem is severe in tribal areas. About two‥third of the students leave the school at the level of primary stage of education. He also added that most tribals tend to use their children for ancillary services so that it would bring additional income for their starving families.

Majority of the parents in Kudubi tribes disfavour the education of their children, disfavour Government's punishments to parents whenever they do not admit their children to school, as reported by Ravindranatha *et al.,* (1998).

Pandey (1999) indicated that most of the tribal respondents (65.37 per cent) did not have any formal education, only 11.80 per cent of them could read only. A good percentage (21.50 per cent) of the tribals were having education upto middle school level, only 1.33 per cent were matriculate and none of the tribal respondents were graduates.

Selvarani (2000) reported that more than two-fifth of the tribal farmers were in the secondary level of education followed by middle level education and rest were either primary level educated or illiterates.

As noted by Marimuthu (2001) many of the tribal respondents (44.28 per cent) were illiterate and rest of them were of primary level middle, higher secondary level and collegiate levels, respectively.

A major scheme in the form of Ashram Schools is run by the Tribal Development Department since 1952 with an objective to improve the educational levels of the tribal population. Ashram Schools are residential schools imparting primary, middle and secondary education to ST boys and girls (TISS, 2015).

2.10.4 Income

Kond tribals of Ganjam district of Orissa depends on forest products mainly for their living. They collect fruits and minor forest produce of the area for exchange in the nearby markets, as reported by Tondan (1988).

From a socioeconomic point of view the initiative to provide land titles in the names of both spouses in tribal families enhanced their social status, security and opportunities for income generation. However, this way of privatizing landed property partially upset the existing community-based social security networks (Pathi and Panigrahi, 1998).

2.11 Status of empowerment of tribal farmers

Menon and Gita (1999) derives the importance of Panchayati raj institutions in the implementation of tribal sub plan. According to their findings, empowering tribal farmers is made possible through empowering the panchayathi raj.

Sircar and Kumar (1999) details about the empowerment of tribal women through farming. They detail about the farm forestry programme in Gujarat which has benefitted the tribal women through many ways. It provides easy employment during the dry season, preventing their migration to nearby industrial towns.

A long-term empowerment is brought out by the Orissa Tribal Empowerment and Livelihood Programme (OTELP) in the northern and southern belts of the state. Livelihood and food security of the poor tribal households are met by promoting a more efficient, equitable, self-managed and sustainable exploitation of the natural resources at tribal people's disposal through off-farm and non-farm enterprise development (Pati and Panigrahi, 1998).

2.12 Status of extension intervention

A skillful extension worker can slowly defuse the negative attitudes of the people, first by winning over the confidence of the clientele and then by making they accept the new ideas and schemes (Rayappa, 1993).

Seema (2002) suggests that grass root level extension functionaries may initiate the functioning of settlement wise micro-groups with properly identified tribes and their leaders so that periodic discussion about the nature of schemes can be done.

As stated in the final report of IAAITA in MP (2003), Extension being a basic essential service, can work through different solutions like privatization, PPP, NGO driven, convergence model etc. as these solutions focus on collectivization and leadership development approaches. Tribal leadership, if developed can harness intent skills of tribals for agricultural improvement in tribal areas.

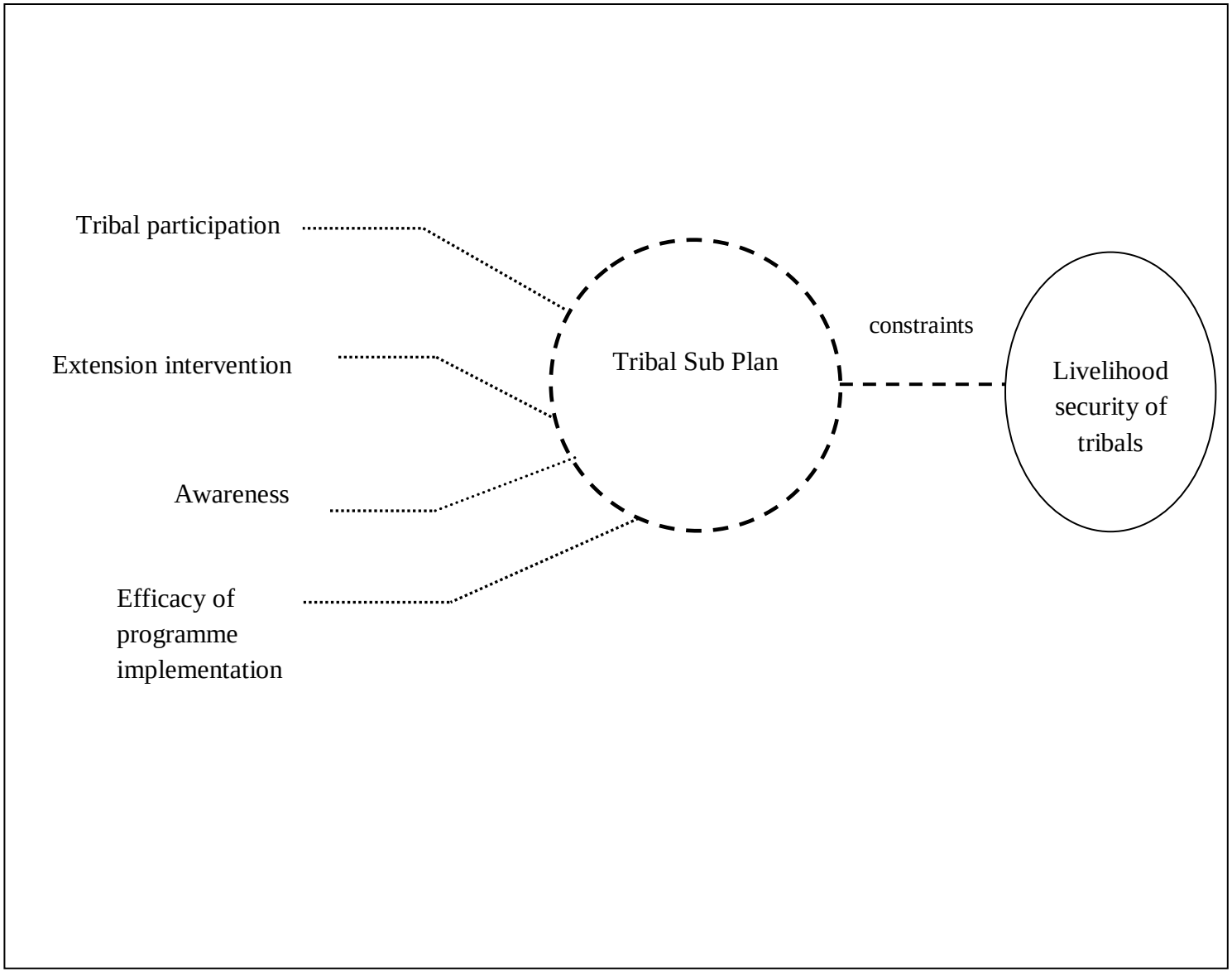


Fig. 1. Conceptual model of the study

Methodology

Chapter 3

METHODOLOGY

This part of the study elaborates the research methods and techniques followed based on the requirement of objectives set forth in this study. Methodological details are given under the following section heads.

3.1 Research design

3.2 Locale of the study

3.3 Selection of sample

3.4 Selection of variables

3.5 Operationalization and measurement of variables

3.6 Tools used for data collection

3.7 Statistical tools used in data analysis

3.1 RESEARCH DESIGN

Research design is the framework of methods and techniques chosen by a researcher to combine various components of research in a practically logical manner so that the research problem is efficiently handled. It provides insights about "how" to conduct research using a particular methodology.

Ex post facto study or after-the-fact research is a category of research design in which the investigation begins after the fact has occurred without interference from the researcher. The majority of social research, in contexts in which it is not possible or acceptable to manipulate the characteristics of human participants, is based on *ex post facto* research designs.

Ex-post facto research design was used for this study. The study attempted to understand the livelihood options opened by the various agricultural projects under Tribal Sub Plan and the impact of such projects in the socio-economic level of tribal lives.

3.2 LOCALE OF THE STUDY

The study was conducted in three districts of Kerala - Wayanad, Idukki and Palakkad. These districts were selected through purposive selection, as they are home to majority of the tribal population in the state. As stated in Kerala Development Report (2008), tribal groups of the state are largely distributed among Wayanad, Idukki, Palakkad districts. In Wayanad district, study was conducted in two panchayaths – Edavaka and Thavinjal. Adimali, Vellathooval and Agali, Pudur were the panchayaths selected in Idukki and Palakkad respectively.

3.2.1 DESCRIPTION OF THE STUDY AREA

3.2.1.a. WAYANAD

Wayanad district is located in the north-east of Kerala state with administrative headquarters at the municipality of Kalpetta. It is set high on the Western Ghats with altitudes ranging from 700 to 2100. The district was formed on 1 November 1980 as the 12th district in Kerala by figuring out areas from Kozhikode and Kannur districts. About 885.92 sq.km of area of the district is under forest. Wayanad has three municipal towns: Kalpetta, Mananthavady and Sulthan Bathery.

The name 'Wayanad' is derived from 'Vayal Nadu' (Malayalam) which translates to 'the land of paddy fields' in English.Wayanad district is bordered by Karnataka to north and north-east, Tamil Nadu to south-east, Malappuram to south, Kozhikode to south-west and Kannur to north-west. The edicts and caves of Ambukuthi Mala and another evidence state that the place is as old as the beginning of the New Age Civilisation. There are many indigenous tribals in this area.

Wayanad have the largest tribal population in Kerala with 8 scheduled tribes including Adiyan, Paniyan, Mullukkurman, Kurichyan, Vettakkuruman Wayanad Kadar, Kattuniakkan and Thachaanadan Mooppan. These communities have a number of symbolic oral narratives.

Agriculture is the backbone of the economy of the district. Most of the lands in the district are used for agricultural purposes. More than half of its population are engaged in agriculture in order to earn their livelihood. The chief agricultural crops in the district are Coffee, tea, cocoa, pepper, plantain, vanilla, rice, coconut, cardamom, tea, ginger, etc. Another source of economy in the district is the cattle farming.

3.2.1.b. IDUKKI

Idukki which lies in the Western Ghats of Kerala, is the second largest district in area. Idukki has a vast forest reserve area; more than a half of the district is covered by forests.The name of the district is derived from the Malayalam word 'Idukku', meaning narrow gorge.

Agriculture is still the largest source of employment in the district as this is the most important segment of the economy.This District has the agro-climatic conditions which is suitable for the cultivation of plantation crops and these includes tea, coffee, rubber, coconut, cardamom, pepper, etc. The District is in the second position regarding agricultural production. Small and marginal farmers are predominant in the district.

Several tribal groups, as well as people from the plains, are found in Idukki. It is believed that the tribal groups migrated from Tamil Nadu and other parts of Kerala in the thirteenth and fourteenth centuries. Idukki has a large population of tribal people who belong to the Proto-astroloid race. It appears that only a few of Idukki's tribal communities are keeping their ethnic uniqueness vital. Education has brought many changes into the lives of these tribes. Their cultures and languages have been very much influenced by migrants from the plains.

People of different tribal groups live in Idukki district. According to the reports of the Integrated Tribal Development Programme (ITDP), nine major tribal groups are found here. The largest tribes are the Mala Arayan, Muthuvan, Mannan, Urali, Ulladan, Paliyan and Mala Pulayan. Mala

Vedan and Mala Pandaram are also found in Idukki, but their population is much smaller than that of the other groups. The Muthuvan, Mannan, Paliyan and Mala Pulayan are culturally related to groups in Tamil Nadu. The Urali, Ulladan and Mala Arayan appear to have migrated to Idukki from other parts of Kerala.

3.2.1.c PALAKKAD

Palakkad District is the largest district in Kerala. Palakkad is bordered on the northwest by the Malappuram District, on the southwest by the Thrissur District, on the northeast by The Nilgiris, and on the east by Coimbatore district of Tamil Nadu. The district is nicknamed "the granary of Kerala'' and "Rice bowl of Kerala".

Palakkad is particularly known for paddy cultivation. Paddy is cultivated in around 83,998 hectares in the district and occupies the first position in the production of rice in the state. Palakkad also occupies the first position in the state for the production of groundnut, tamarind, turmeric, tuber, vegetables, pulses, mango, banana, plantain and cotton. Rubber, coconut, arecanut, and black pepper are also cultivated extensively like other parts of Kerala.

Tribal population of Palakkad is concentrated in Attappadi block of **Mannarghat** Taluk. Attappadi is an extensive mountain valley at the headwaters of the Bhavani river nestled below the Nilgiri Hills of the Western Ghats. It is bordered to the east by Coimbatore district in Tamil Nadu, on the north by the Nilgiris, south by the Palghat taluk and on the west by revenue villages of Mannarghat taluk of the Palghat District and Ernad taluk of the Malappuram district.

There are 192 tribal hamlets in Attappadi. Because of the inward migration of settlers from the mainland of Kerala, the tribal population of Attappadi had decreased from around 90 percent in 1951 to around 40 percent only, by 2001. The tribal population of the valley is mostly Muduga. Irula, Kurumba tribal people.

3.3 SELECTION OF SAMPLE

Plate 1. Locale of the study

IDUKKI

PALAKKAD

The sample of respondents included 60 tribal farmers and 60 people's representatives from the selected Grama Panchayaths. From Wayanad, Idukki and Palakkad, 2 panchayaths with maximum tribal population were selected. The list of Grama Panchayaths selected for the study is given in the table below.

From each of these Grama panchayaths, 10 tribal farmers were randomly selected, which made a sample size of 60. A sample of 60 people's representatives was constituted by selecting 10 people's representatives randomly from each Grama panchayath.

Table 3.1 List of Grama Pachayaths selected for the study

District	**Grama Panchayath**
Wayanad	Edavaka
	Thavinhal
Idukki	Adimali
	Vellathooval
Palakkad	Agali
	Pudur

3.4 SELECTION OF VARIABLES

Based on the objectives of the study, suitable variables were selected. The selected dependent and independent variables and the methods adopted for their selection are given below:

Table 3.2 Details of variables and their measurement

Sl.No.	**Variables**	**Method of measurement**
Independent variables		
1	Age	Scale developed by Ganesan (1989)
2	Gender	Respondent's gender reported
3	Family type	Scale used by Tekam(2013)
4	Education	Scale developed by Murali (1997)
5	Occupation	Scale developed by Barua(2012)

6	Annual income	Classification given by National Council for Applied Economic Research (NCAER)
7	Total landholding	Scale developed by Barua(2012)
8	Status of extension intervention	Scale developed by Sripal(1983)
9	Extent of participation in developmental activities	Scale developed by Seema (2002)
10	Awareness on developmental programs	Scale developed by Seema (2002)
11	Efficacy of project implementation	Interview schedule developed
Dependent variables		
1	Extent of livelihood security	Index developed by Barua(2012)
2	Socio-economic impact of selected TSP projects	Interview schedule developed
3	Empowerment of tribals	Index developed by Barua(2012)

3.5 OPERATIONALIZATION OF VARIABLES

Operationalizing variables refers to defining and measuring variables used in the study.

3.5.1 Age

It refers to the chronological age (number of completed years) of the respondents at the time of study, was considered as the age of respondent. The number of years completed, is taken as the score of the respondent. Respondents were categorized as per the classification procedure followed by Government of India (GOI) in the Census report, 2011 as shown below:

Table 3.3: Age of the respondents

Sl. No.	Category and scale
1	Young (less than 35)
2	Middle aged (35-55)
3	Aged (more than 55)

3.5.2 Gender

Gender refers to the socially constructed characteristics of women and men, such as norms, roles and relationships of and between groups of women and men. Gender of respondents was categorized into male or female as per their response.

Table 3.4: Gender of the respondents

Category	Score
Male	1
Female	2

3.5.3 Family type

It refers to the family which consisted of husband and wife with their unmarried children is considered as nuclear family, whereas two or more married individual with common kitchen are considered as joint family. On the basis of information regarding the nature of family, they have been categorized into two groups by Tekam (2013).

Table 3.5: Family type of the respondents

Category	Scores
Nuclear family	1
Joint family	2

3.5.4 Education

Education status was operationalized by using the criteria of functional literacy and number of years of formal education of respondents. The scoring procedure followed by Murali (1997) was used in this study.

Table 3.6: Education of the respondents

Education	Score
Illiterate	1
Functional literate	2
Primary school	3
Secondary school	4
Graduate and above	5

3.5.5 Occupation

For this variable, the main source of income of the family was considered and a classification was made by Barua (2012). The categories are as follows:

Table 3.7: Occupation of the respondents

Sl.No.	Sources	Score
1	No occupation	1
2	Agricultural labour	2
3	Farming alone	3
4	Farming+ Agriculture related occupation	4
5	Nonagricultural labour	5

3.5.6 Annual family income

The total income (in Rs) of a family per year was asked and classified according to the income classification given by National Council for Applied Economic Research (NCAER).

Table 3.8: Annual income of the respondents

Income (Rs)	Score
Lower (lesser than 22,500)	1
Lower middle (22,500 to 45,000)	2
Middle (45,001 to 66,000)	3
Upper middle (66,001 to 96,000)	4
Higher (more than 96,000)	5

3.5.7 Total land holding

The extent of land an individual possessed and cultivated was termed as land holding. The procedure followed by Barua (2012) to convert the total extent of land possessed into scores as follows:

Table 3.9: Landholding of the respondents

Extent of land	Score
Marginal (0-1 ha)	1
Small (1-2 ha)	2
Medium(2-4ha)	3
Big (Above 4 ha)	4

3.5.8 Awareness on development activities

A scale was developed by Seema (2002) to measure the awareness on various tribal development activities. To know the awareness of various tribal development schemes identified under this study, a dichotomous response was received from the respondents i.e., either 'aware' or 'not aware' carrying the score 1 and 0, respectively. The responses scored on 'aware' were pooled together for computing the awareness score of the individual.

3.5.9 Status of extension interventions

Scale developed by Sripal (1983) was used to measure the linkage of tribals with extension personnel. Communication of tribals with Oorukoottam, Tribal promoter, Tribal extension officer, Tribal development officer, NGOs and others were rated into ‘very often’, ‘often’ and ‘never’. The categorization and scoring are given below:

Table 3.10: Level of extension contact

Category	Score
Never	0
Often	1
Very often	2

3.5.10 Extent of participation in developmental activities

The scale developed by Seema (2002) was followed here in this study with slight modification. The social participation was measured in terms of the membership of individual in any organization. The scoring pattern of the variable was as follows:

Table 3.11: Level of participation in developmental activities

Category	Score
No membership in any organization	0
Membership in any organization	1
Office bearer in any organization	2

3.5.11 Perceived efficacy of implementation of TSP projects

An interview schedule was developed for measuring the perceived efficacy of people's representatives on project implementation. Scoring was done for categories like beneficiary selection, distribution of financial and material aids, maintaining the activities, follow up and feedback. Scoring given is:

Table 3.12: Perceived efficacy of project implementation

Category	Score
Very good	5
Good	4
Normal	3
Poor	2
Very poor	1

3.5.12 Socio-economic impact of selected TSP projects

For assessing the impact of the TSP projects in their socio-economic life, tribal farmers were interviewed and data was collected. Changes in the level of their income, production, savings, education and social participation were assessed by giving ratings 1, 2 and 3 for low, medium and high respectively.

3.5.13 Social and institutional constraints in implementing TSP projects

Social and institutional constraints that come in the way of effective implementation of TSP were enlisted by consulting the literature, experts and some tribal representatives. Then a list of eight major constraints was included in interview schedule and respondents were asked to rank these constraints based on their perception.

3.5.14 Institutional changes in the administration of TSP

The major institutional changes that have occured in the administration of TSP in Kerala were found out using review of literature, consultation with officials in the State Tribal Development Department and discussion with extension officials during data collection.

3.5.15 Pattern of outlay and expenditure of TSP funds in agricultural sector

The distribution and utilization of funds for agricultural activities was obtained from secondary data sources like panchayath records and annual budget reports. Funds allotted to agricultural sector were distributed for crop cultivation, animal husbandry, backyard poultry, irrigation and farm mechanization programs.

3.5.16 Major physical and financial targets of TSP projects

Under agricultural sector, the beneficiary targets and the funds allotted for them for various programs were collected during data collection. This was made possible through interviewing the Panchayath officials, by going through the beneficiary lists and annual budget reports.

3.6 MEASUREMENT OF VARIABLES

3.6.1 Extent of livelihood security of beneficiaries

Livelihood security was operationalized in this study as adequate access to income and other resources to meet basic needs including food and nutrition, health facilities, clean environment, habitat facilities, educational opportunities, community participation and social integration. In

order to measure the livelihood security of the respondent's household a livelihood security index (LSI) developed by Abadi Teklehaimanot (2010) was used. The components of the LSI were as follows:

i. **Food Security:** It was operationalized as the availability and access to balanced food at household level.

ii. **Income Security:** It was operationalized as the access to regular and satisfied employment.

iii. **Habitat Security:** It included housing with basic amenities.

iv. **Educational Security:** It included the educational level of the family and access to educational facilities including higher education.

v. **Health security:** It included the health status of the family and access to health care. facilities.

vi. **Social Security:** It included social participation and social status of the family.

vii. **Environmental Security:** It included pollution free environment, access to water resources, ecofriendly farm management and protection from flood and drought conditions.

The maximum and minimum score possible for each component were as follows:

Table 3.13: The maximum and minimum scores possible for each component of Livelihood Security Index

Components	**Maximum score**	**Minimum score**
Food security	12	4
Income security	8	4
Habitat security	12	6
Educational security	10	5
Health security	6	3
Social security	7	3
Environmental security	23	9

Table 3.14: Scale Values of Livelihood Security Components

Components	Scale values
Food security	11.53
Income security	9.56
Habitat security	8.78
Educational security	5.01
Health security	7.91
Social security	5.18
Environmental security	6.66

The livelihood Security Index (LSI) for each respondent was calculated using the following formula:

$$LSIi = \frac{\Sigma Uij.\ Sj \times 100}{\text{Total Scale Value}}$$

LSIi= Livelihood Security Index of i^{th} respondent

Uij= Unit score of the i^{th} respondent on j^{th} component

Sj= Scale value of the j^{th} component

$$\text{Where } Uij = \frac{Yij - \text{Min } yi}{\text{Max } yj - \text{Min } yj}$$

Uij = Unit score of the i^{th} respondent on j^{th} component

Yij = Value of i^{th} respondent on the j^{th} component

Max yj = Maximum score on the j^{th} component

Min yj = Minimum score on the j^{th} component

3.6.2 Status of empowerment of tribals

For measuring the empowerment, an index was developed by Barua (2012) for the respondents by using a formula and a 5-point rating scale constructed with four major components of empowerment viz. psychological empowerment, social empowerment, economic empowerment and political empowerment was taken into consideration.

Empowerment was measured based on perceived rating of respondents on rating scale. The empowerment index score for each respondent was calculated with the following formula:

$$\text{Empowerment index} = \frac{\text{Scores obtained by the individual respondent X 100}}{\text{Maximum score possible (95)}}$$

3.7 Tools used for data collection

A structured interview schedule was used to collect data from the respondents. It was prepared by going through previous researches and studies and also after consultation with experts in the field of agricultural extension. To check the validity of the interview schedule, a pilot study was conducted and the tool was subjected to modifications and corrections.

Secondary data sources like research papers, review of reports and data from websites was also utilized for the study.

3.8 Statistical tools used

3.8.1 Descriptive statistics

Frequency and Percentage were used to find out the distribution of respondents based on their scores under each variable.

3.8.2 Arithmetic Mean

For the scores given to the variables under study, mean values were calculated to do comparison between the groups.

3.8.3 Kendall's Coefficient of Concordance (W)

It is a non-parametric test used to determine the association among K sets of rankings. In the study, Kendall's Coefficient of Concordance test was employed to check the agreement among the people's representatives in ranking the social and institutional constraints.

3.8.4 Wilcoxon signed-rank test

The Wilcoxon signed-rank test is a non-parametric statistical hypothesis test used to compare two related samples to assess whether their population mean ranks differ. This test was used to compare the mean of Livelihood Security Index (LSI) of the respondents before and after the implementation of TSP projects.

3.8.5 Kruskal-Wallis test

The Kruskal-Wallis one-way analysis of variance by ranks is a useful tool to decide whether k independent samples originate from different populations. The Kruskal-Wallis technique tests the null hypothesis that the k samples come from the same population or from identical populations with respect to averages. This test was used to check the significant difference in the mean ranks of Livelihood security index (LSI) and empowerment index of the 3 districts.

3.8.6 Sign test

Sign test is a statistical method to test for consistent differences between pairs of observations. To assess the changes in the socio-economic condition of the tribal respondents, sign test was used in the study.

3.8.7 Binary logistic regression

Many social phenomena are qualitative rather than quantitative in nature. In a binary discrete phenomenon, the nature of an event occurs usually takes the form of a dichotomous variable.

Logistic regression analyses the relationship between multiple independent variables and its response variable. The response variable 'Y' is a dichotomous variable with possible values '0' and '1'. Let there be 'K' independent variable. Then the prediction equation takes the form:

$$E(Y/x_1, x_2 \ldots xn) = \frac{\text{Exp}(\beta_0+\beta_1 x_1+\beta_2 x_2+\ldots \beta_k x_k)}{1+\text{Exp}(\beta_0+\beta_1 x_1+\beta_2 x_2+\ldots \beta_k x_k)}$$

where β_0, β_1, $\beta_2 \ldots \beta_k$ are the estimated logistic regression coefficients. They are interpreted in terms of probability. For every unit change in a given independent variable, there will be a change in probability of being in a category. In the study the categories are: Beneficiaries and non-beneficiaries. The predicted probability for each case can be derived from the odds ratio, which will help in prediction of the group into which a new entity will fall. The corresponding probability is given by Exp(B)/1+Exp(B).

Exp(B) represents the ratio change in the odds of the event of interest for a one-unit change in the predictor.

The Hosmer Lemeshow goodness of fit is used in assessing the fit of logistic regression model. Wald statistic which is the ratio of the estimated coefficient to its standard error is used to test the significance of individual logistic regression coefficients for each independent variable.

To predict the chances of availing the benefits of TSP programs by the tribals, this analysis was done.

Plate 2. Data collection

Results & Discussion

Chapter 4
RESULTS AND DISCUSSION

This section details the results of the study on the basis of the data collected. The results have been discussed with reference to the study and the previous studies reviewed. The findings are presented under the following sub headings:

4.1 Institutional changes in the administration of TSP in Kerala

4.2 Pattern of outlay and expenditure of TSP funds in the agricultural sector

4.3 Major physical and financial targets of TSP projects in agriculture

4.4 Extent of livelihood security provided by the TSP projects

4.5 Socio- economic impact of selected TSP projects

4.6 Social and institutional constraints in the implementation of TSP projects

4.7 Status of extension interventions

4.8 Status of empowerment of tribals

4.9 Extent of participation in developmental activities

4.10 Awareness of tribals on development programs

4.11 Perceived efficacy of implementation of TSP projects

4.12. Socio-economic profile of the respondents

4.1 Institutional changes in the administration of TSP in Kerala

In Kerala, tribal welfare activities were carried out under Scheduled Caste Welfare Department till 1975. As per the norms existed at that time, annually two percent of the budget of the Scheduled Caste Department was used for the welfare and development of Scheduled Tribes. But later it was realized that even this two percent was not properly used for tribals of the state. Hence as per the direction from central government, a separate procedure for utilization of funds under Tribal Sub Plan was introduced in Kerala the idea of formulating separate tribal sub-plan for tribal areas was suggested by the Government of India and implemented in the State from 1976 onwards. All development blocks with more than 50 per cent tribal concentration were identified and special plans were prepared for them. Accordingly, five geographical regions with considerable concentration of tribal population were identified and declared as sub-plan areas and special projects (Integrated Tribal Development Projects) were prepared for them. These projects were later revised to cover the dispersed tribal population around these areas (Nayar, 1985).

In Tribal Sub Plan areas, 'area-based development' approach was followed. Based on this approach, the tribal areas of the state were divided into five Integrated Tribal Development Project regions— Punalur, Idukki, Nilambur, Mananthavady and Attappadi (GOK, 1985). The total population of these regions (tribal and non-tribal) constituted 1.15 lakhs which is 0.54 per cent of the population of the state. Sixty-four per cent of the population of these areas (ie. 0.74 lakhs) was tribal and they accounted for 36 per cent of the total tribal population of the state which was 2.69 lakhs. Later in 1980, Nedumangad and Thodupuzha ITDPs were added.

According to Nair (1985), the sub-plan areas were not homogeneous in character. They differ in size, proportion of tribal population, composition of the different tribes and also in the level of development. Punalur has the largest area (2648 km) and Mananthavady the smallest (503 km). The Nilambur sub plan area had 100 per cent tribal population, Idukki 86 per cent, Mananthavady 82 per cent, Punalur 51 per cent and Attappadi 42 per cent.

The following sources of funds have been earmarked for TSP:

(1) General Sector programmes including sectoral allocation for scheduled tribes' development by the state government

(2) Centrally sponsored schemes

(3) Special Central assistance for tribal area sub-plan

(4) Institutional finance.

The following financial provisions have been made in the tribal sub-plan of the State during the 6th Plan period 1980-85.

Table 4.1: Financial provisions under TSP during 1980-85

Special Central Assistance	Rs.625 lakh
State Sector Schemes	Rs.2410.95 lakh
Centrally Sponsored Schemes	Rs.700 lakh

Source: GOK, 1983

Tribal Sub Plan concept was not fully operationalized in the state because, in an administrative area non-tribals constituted majority of the population. Lack of coordination between the implementing agencies and absence of integration of the schemes implemented were the characteristics of the scheme in the 1970s. To tackle these issues, District level working groups were formed.

In 1983-84, District level working groups were constituted to smoothen the working of TSP projects. GOK (2006) report outlines that the TSP projects were approved and implemented by the working group under the chairmanship of concerned district collectors. Beneficiary selection and formulation of programs was carried out by different sectoral departments.

To monitor the functioning of TSP projects, committees are constituted at the district and block levels. District level monitoring committee for TSP works under the chairmanship of District Collector with all the district level officers as its members. (GOK, 2006). Under the working groups TSP funds were spent through the departments on schemes which were prepared at the district level and approved by the working group. The practice followed was to set apart certain percentage of plan provision under the respective head of department.

But even with the establishment of such committees, the grass root level problems remained unsolved. This is underlined by Kumar (1998) that the planning was done among high official working committees chaired by the district collectors, without realizing the problems in the field level. The needy sectors and programmes were identified by the department heads after a brief visit through the colonies.

Decentralized governance became reality after the 73rd amendment of the Indian constitution in 1992. One of the major operational aspects of the implementation of the 73rd constitutional amendment was to make the Panchayathi Raj Institutions (PRIs) fully functional. Article 243(G) of the constitution visualizes panchayaths as institutions of self-governance and its role in planning and implementation of programs of economic development and social justice.

With the introduction of decentralized planning program in Kerala, tribal development in the state became more participatory in its approach. Kerala has been successfully carrying out democratic decentralization, and has substantially transformed the functions of local governments in line with the 73rd and 74th Constitutional amendment acts, which institutionalized the local government system in India and the formulation and implementation of micro plans with community participation has produced remarkable changes in the dynamics of local development. He added that this initiative for participatory planning at the local level taken by the government of Kerala enormously empowered local communities and the different actors in the local political system.

Administration of TSP was thus transferred to local government institutions. As stated by GOK (1999), from 1997-98, as in the case of Special Component Plan (SCP) for Scheduled castes, a major portion of Tribal Sub Plan funds have been devolved to the local bodies.

Tribal administration in India, meanwhile witnessed a major change, with the introduction of Panchayats (Extension to the scheduled areas) act. This act, popularly known as 'PESA' was enacted by the Indian Parliament on Dec 24, 1996. Baiju (2009) opines that the PESA Act has been eulogized by many social activists as the epitome of grass root level democracy. It was enacted to rectify the problem of tribal development administration that were not addressed in

the 73rd constitutional amendment enacted in 1996. Under PESA act, the 'Gaon Sabha' or the Gram Sabha at the hamlet/village level should exercise the different functions as traditionally prescribed. More specifically, management of land, forest, water, air etc. should be vested in it. This right should be deemed as axiomatic in the functioning of Gram Panchayat, the intermediate panchayat and the district councils, and also where necessary to be woven into regulations, laws etc. The PESA Act was assumed to offer immense possibility of self-rule to the tribal people to the institutions like Panchayat and Grama Sabhas (Menon & Sinha, 2003).

The powers vested in the Grama Sabha in the scheduled area are:

a. Ownership of Minor Forest Produce (MFP)
b. Approval of development plans
c. Selection of beneficiaries under various programmes
d. Consultation on land acquisition
e. Management of minor water bodies
f. Control of minor minerals
g. Regulation prohibition on sale of intoxicants
h. Prevention of alienation and restoration of unlawfully alienated land of the STs
i. Management of village markets
j. Control of money lending to the STs
k. Controlling institutions and functionaries in all social sectors
l. Giving utilization certificate for funds used for the projects and programmes of social social and economic development etc. to the village panchayats (Menon & Sinha,2003).

But the 73rd and 74th constitutional amendments were not extended to the Scheduled areas. Ministry of Rural Development, Government of India derived a solution for this, by appointing a 22-member committee in 1994 comprising selected Members of Parliament and Experts. The committee, headed by Dilip Singh Bhuria then recommended exceptions and modifications in Part IX of the Constitution in its application to the Scheduled Areas. The Government of India accepted the recommendations and PESA was enacted on 24th December 1996 to extend Part IX of the Constitution to the fifth schedule areas, comprising the states Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Maharashtra, Madhya Pradesh, Orissa and Rajasthan.

However, ‘PESA’ is functional in 10 Indian states only. As stated by Ministry of Panchayathi Raj (2016), at present, Fifth Schedule Areas exist in 10 States viz. Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana.

The decentralization of Tribal Sub Plan resulted in improving in the allocation of plan funds and project implementation. In the absence of effective beneficiary participation, the decentralization of TSP tended to be increasingly bureaucratic. It was in the ninth five-year plan (1997-2002), a major step was taken towards democratic decentralization by devolving the planning of TSP to local self-governments and the plan funds were earmarked in proportion to the tribal population. From 1997, the system of providing notional flow of funds was discontinued.

About 65-75 per cent of the plan funds under TSP was being earmarked to local self-governments for implementation of projects under decentralized planning. Accordingly, separate taskforces were constituted in all the local self-governments for preparation of projects under TSP. Instead of normal gramasabhas ‘Oorukoottams’ or tribal gramasabhas were organized in tribal settlements for identification of projects, selection of beneficiaries etc. The local self-government institutions were authorized to conduct tribal gramasabhas to identify the needs and problems in tribal areas.

‘Oorukoottams’ are tribal hamlet groups formed under the Forest Rights Act (FRA) of 2006, entitled for the administration of tribal welfare activities. Kerala Government’s declaration to recognize the hamlet level assembly of all adult members not less than 50 families as '*Oorukoottam*' was a major step in TSP administration. As the grassroot level body in decision making for tribals, *‘Oorukoottam’* did a significance change in ST developmental process especially in the implementation of Tribal Sub Plans.

Oorukoottams would be held with two weeks prior notice and the meeting would be facilitated by different functionaries assigned by the government. The local government set up a team of government functionaries consisting of two tribal promoters, Village Extension Officers (VEOs),

Agricultural demonstrators, Health workers, Anganwadi workers and School teachers. Each team would be given a definite number of hamlets where they have to be present in *Oorukoottam* meetings. The quorum for the *Oorukoottam* meetings would be 50 % of the adult population and among those participating at least 50% should be women.The local development plan would fan out to every tribal settlement and hold preliminary *Oorukoottam* meetings and meetings of the tribal neighbourhood groups through trained tribes known as tribal promoters. In these meetings, the forthcoming planning process would be explained clearly in the local dialect and the *Oorukootam* would be required to come out with their suggestions for development projects.

In 2001-02, administration of Tribal Sub Plan was taken away from the local governments and was given to the Tribal department. But later in 2003, TSP administration was fixed back to the local government bodies. GOK (2002) reports that the TSP component of the annual plan for the year 2001-02 was resumed from local governments and placed at the disposal of the Director, Scheduled tribe development department under the TSP pooled funds for the formulation and implementation of TSP programs with tribal 'oorukoottams' as basic units. But, based on experience, this division has been resumed from 1-4-2003 and one half of Tribal Sub Plan budget was earmarked to Local Self Government Institutions. The balance amount was set apart to Scheduled Caste/Scheduled Tribe Development Departments and other Development Departments. A portion of funds was considered as Notional Flow to other departments till 2008-09. This was meant for implementing schemes exclusively for SC/ST population in the respective sectors. As this experiment was not found successful, the concept of Notional Flow was dispensed from the annual plan 2009-10.

From 2009, a system of earmarking certain amount of TSP as pooled fund for taking up schemes adopting a project approach was introduced. This gives scope to get wide range of schemes with varied objectives and physical targets which put together will help the all-round development of the targeted groups. Out of the total TSP plan outlay, a certain percentage of funds are allocated to local governments under decentralized planning and the remaining to the ST development department.

4.2 Pattern of outlay and expenditure of TSP funds in the agricultural sector

In Edavaka panchayath, the funds allotted for crop cultivation and animal husbandry programs has decreased from Rs.5 lakh to Rs. 3 lakh and from Rs.6 lakh to Rs.5 lakh respectively when comparing two years. Fig 4.2 shows that they have not allotted any fund for backyard poultry in 2016-17 period and no fund was allotted for irrigation purpose in any of the years. For farm mechanization, fund has increased.

Table 4.2: Fund allocation under TSP in different panchayaths

Panchayath	**Crop cultivation**		**Animal husbandry**		**Backyard poultry**		**Irrigation**		**Farm mechanization**	
	2015-16 (Rs.in lakh)	2016-17 (Rs.in lakh)	2015-16 (Rs.in lakh)	2016-17 (Rs.in lakh)	2015-16 (Rs.in lakh)	2016-17 (Rs.in lakh)	2015-16 (Rs.in lakh)	2016-17 (Rs.in lakh)	2015-16 (Rs.in lakh)	2016-17 (Rs.in lakh)
Edavaka	5	3	6	5	5.5	-	-	-	-	6
Thavinhal	8.5	4.5	5	4	5.5	4	-	2.2	-	3
Adimali	3.5	4	4	4	3	3.5	-	-	2.7	-
Vellathooval	3	4	4	5	5.5	3	-	-	-	2
Agali	6	5.5	4.5	4	4	5	-	5	5	-
Pudur	5	4.5	5	7.5	3	3.5	-	5.5	7.5	-

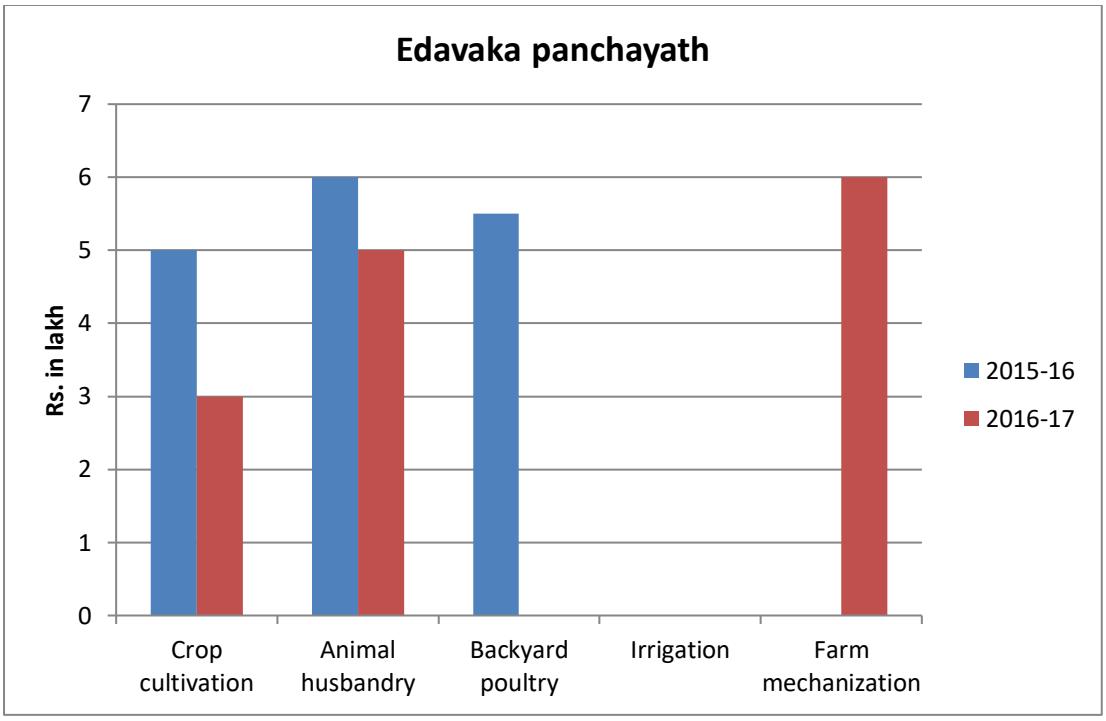


Fig 4.2 Pattern of outlay of TSP funds in Edavaka panchayath

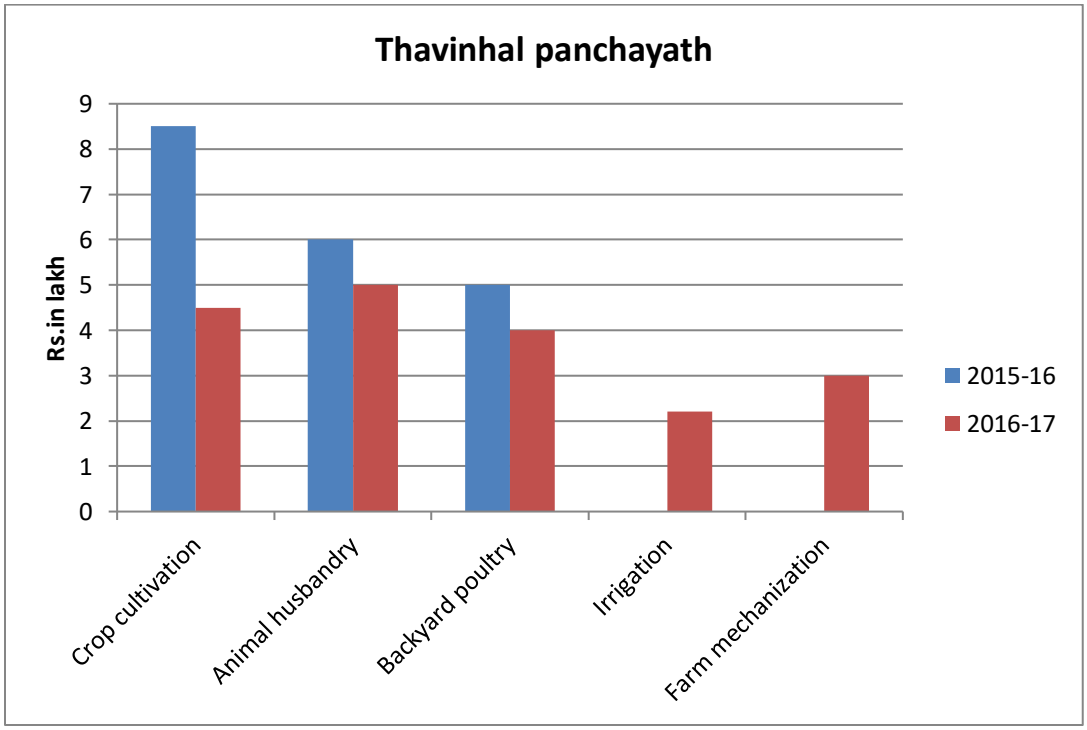


Fig 4.3 Pattern of outlay of TSP funds in Thavinhal panchayath

In Thavinhal panchayath, there is a decreasing trend of fund distribution for crop cultivation, animal husbandry and poultry programs as shown in Fig 4.3. Animal husbandry fund shows a decreasing trend from Rs. 6 lakh to Rs. 5 lakh and poultry from Rs. 5 lakh to Rs. 4 lakh. For crop cultivation, the funds are reduced from Rs. 8.5 lakh to Rs. 4 lakhs. For irrigation and farm mechanization, they have not allotted any funds in 2015-16.

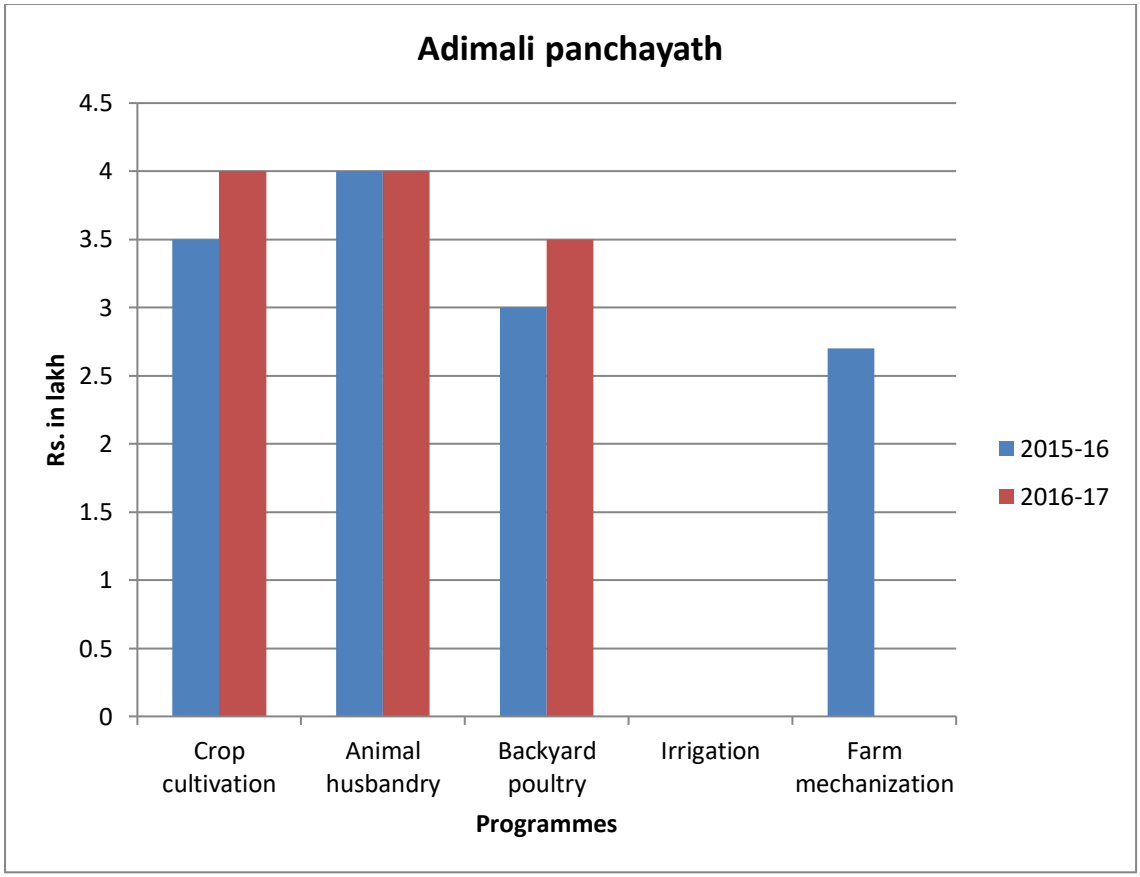


Fig 4.4 Pattern of outlay of TSP funds in Adimali panchayath

In Adimali, the distribution of TSP funds for crop cultivation and backyard poultry has increased from Rs.3.5 lakh to Rs.4 lakh and from Rs. 3 lakhs to Rs. 3.5 lakh respectively. As per the Fig 4.4, for animal husbandry, there is no change in the funds allocated. No funds are allotted for irrigation in any of the years and for farm mechanization Rs. 2.7 lakh was allocated in 2015-16 period.

At the same time, in Vellathooval panchayath they have given more funds for crop cultivation and animal husbandry programs in 2016-17 compared to 2015-16 which can be seen in Fig 4.5. Rs. 4 lakh was allotted to crop cultivation in and Rs. 5 lakh to animal husbandry in 2016-17. But for poultry, it is showing a decreasing trend from Rs.5.5 lakh to Rs.3 lakh. No funds are distributed for irrigation programs in any of the years and for farm mechanization Rs. 2 lakh is allotted in 2016-17.

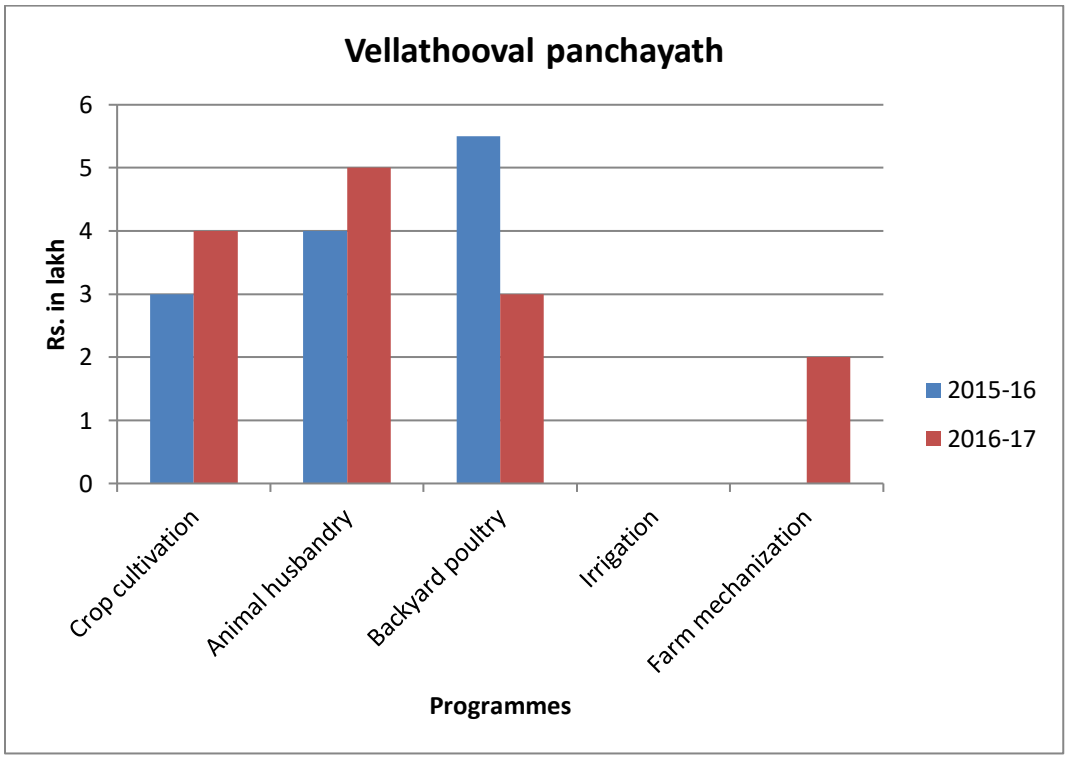


Fig 4.5 Pattern of outlay of TSP funds in Vellathooval panchayath

Fund allocation for crop cultivation and animal husbandry programs, a slightly decreasing trend is seen in Agali panchayath. As per the Fig 4.6, fund for crop cultivation was decreased to Rs. 6 lakh from Rs. 6.5 lakh and for animal husbandry, it is decreased from Rs. 4.5 lakh to Rs. 4 lakh. For poultry, fund was increased from Rs. 4 lakhs to Rs.5 lakh. For farm mechanization, Rs.5 lakh is provided in 2015-16 and for irrigation purpose, Rs. 5 lakhs are provided in 2016-17. It is because of the increasing

demand for poultry birds, allocation was increased by Rs.1 lakh. Poultry was found more beneficial and yielding in the tribal households. Crop cultivation has reduced when compared to previous year.

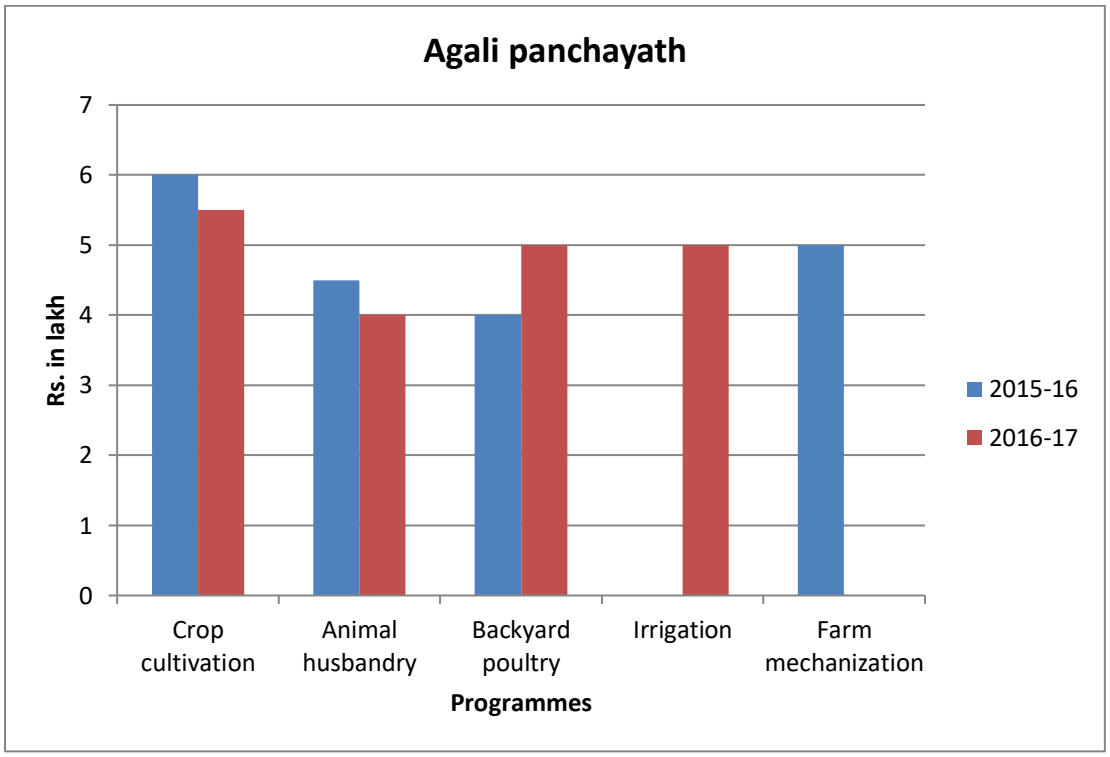


Fig 4.6 Pattern of outlay of TSP funds in Agali panchayath

The TSP fund allocation in Pudur panchayath has shown an increasing trend for animal husbandry and poultry programs. For poultry, fund was increased from Rs. 3 lakh to Rs. 3.5 lakh. Fig 4.7 shows that fund distribution for animal husbandry has increased from Rs. 5 lakh to Rs. 7.5 lakh. For crop cultivation, fund has decreased from Rs.5 lakh to Rs. 4.5 lakh. Rs. 5.5 lakh was distributed for irrigation in 2016-17 and Rs. 7.5 lakh was distributed for farm mechanization purpose in 2015-16.

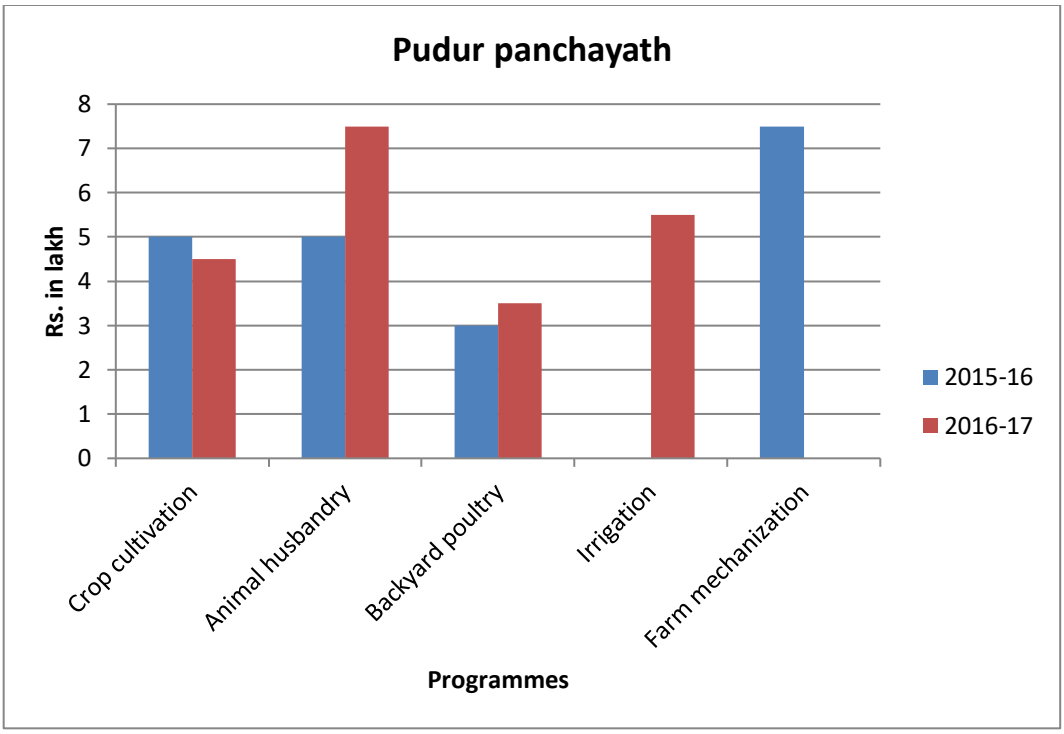


Fig 4.7 Pattern of outlay of TSP funds in Pudur panchayath

In all the 6 panchayaths funds were allotted for crop cultivation, animal husbandry and poultry programs. But the fund distribution for irrigation and farm mechanization programs was not continuous. Under farm mechanization programs grass cutters and spray pumps were distributed. Funds allotted for crop cultivation includes funds for crop subsidy, seed materials and fertilizer supply. Poultry programs and animal husbandry programs were given importance as tribals have more demand for it. The tribal women play a significant role in animal husbandry and are directly involved in most of the operations relating to feeding, management and health-care of the livestock. Landless tribals depends on cattles, goats and poultry for their living. This is in line with the remarks made by (Singh, 1996) that tribal farmers get additional benefits through implementation of backyard poultry, goatery and dairy units.

4.3 Major physical and financial targets of TSP projects in agriculture

Tribals prefer rearing cattle and poultry birds over crop production. As crop cultivation needs land and bigger capital, tribals go for the easy option. ie., animal husbandry. Distribution of poultry birds, agricultural machineries and cattle as physical targets achieved by different panchayaths. (See table 4.3)

Table 4.3: Major physical targets under different panchayaths

Panchayath	2015-16			2016-17		
	Poultry birds distributed	Farm machineries	Cattle distributed	Poultry birds distributed	Farm machineries	Cattle distributed
Edavaka	4917	-	11	-	22	8
Thavinhal	4963	-	8	3698	13	7
Adimali	2185	11	7	4855	-	7
Vellathooval	4711	-	5	2154	8	6
Agali	3215	17	8	4512	-	7
Pudur	2547	-	8	3025	-	12

Distribution of poultry birds, agricultural machineries and cattle is expressed as physical targets achieved by different panchayaths. Tribals prefer rearing cattle and poultry birds over crop production. As crop cultivation needs land and bigger capital, tribals go for the easy option ie., animal husbandry. Farm machineries distributed includes grass cutters, sprayers, tillering machines.Edavaka panchayath has distributed 4917 poultry birds in 2015-16, but have not distributed in next year. As per Table 4.3, Edavaka and Thavinjal panchayaths have not distributed agro-machineries in 2015-16 whereas they have distributed 22 and 13 in the next year respectively. Adimali, Agali and Pudur panchayaths have not given any farm machineries in 2016-17. All the panchayaths have done cattle distribution to tribal farmers in both the years.

Table 4.4: Major financial targets under different panchayaths

Panchayath	2015-16	2016-17
	Physical target	**Financial target (Rs.)**
Edavaka	4933	14 lakhs
Thavinhal	3129	15 lakhs

Adimali	454	11 lakhs
Vellathooval	227	14 lakhs
Agali	7935	19.5lakh
Pudur	3723	21 lakhs

Fig 4.8 shows that financial target of Edavaka panchayath has decreased from Rs.16.5 lakh to Rs.14 lakh. Thavinhal and Adimali panchayaths have also decreased their funds. In Thavinhal it has decreased from Rs.17 lakh to Rs.15 lakh and in Adimali it has decreased from Rs.13.2 lakh to Rs.11 lakh. There is no change in the amount in Agali panchayath. It is Rs. 19.5 lakh for both the years. An increasing trend in fund distribution is shown by Vellathooval and Pudur panchayaths. In Vellathooval fund has increased from Rs. 12.5 lakh to Rs.14 lakh. An increase of 0.5 lakh was observed in Pudur.

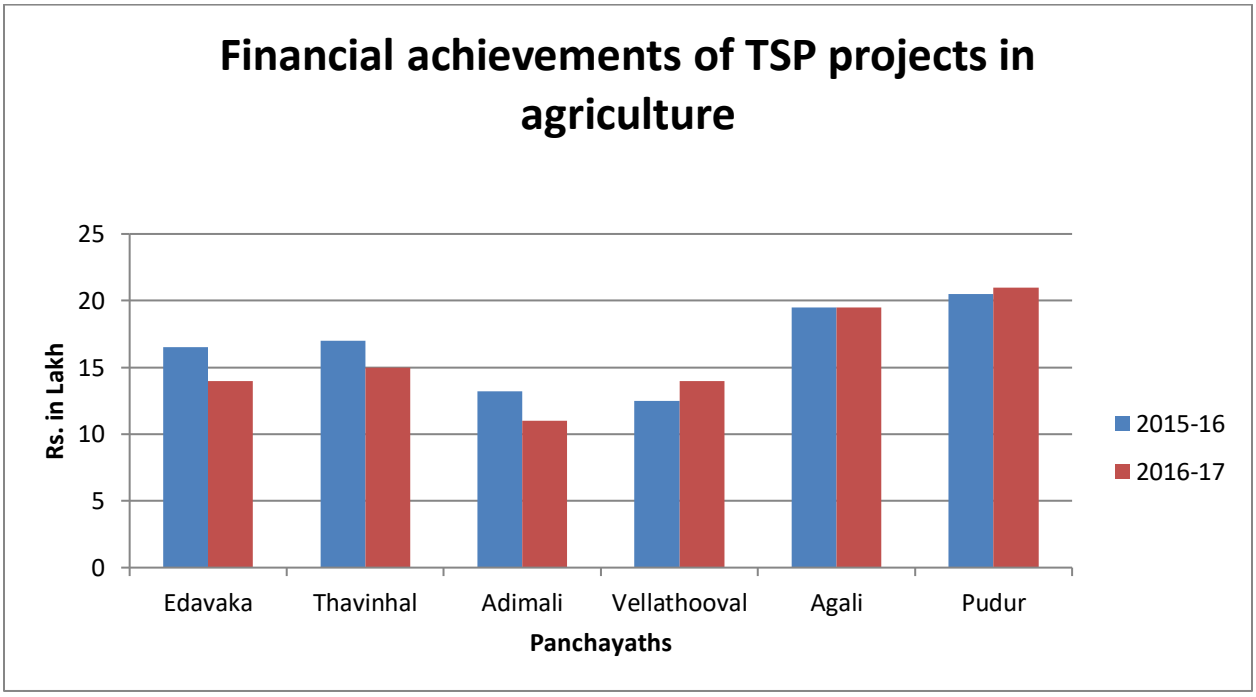


Fig 4.8 Financial targets of TSP projects in agriculture

4.4 Extent of livelihood security provided by the TSP projects

Livelihood security of Tribals was assessed by comparing their LSI before and after TSP programmes. Tables 4.5 shows the Livelihood security of tribals before TSP.

Table 4.5: Distribution of respondents on Livelihood Security before TSP programs

Mean	17.2052	
Standard deviation	1.859	
Range	15.20-23.13	
Categories	**Frequency**	**Percentage**
Very low (0-20)	56	93.33
Low (20-40)	4	6.66
Medium (40-60)	0	0
High (60-80)	0	0
Very high (80-100)	0	0
Total	60	100.0

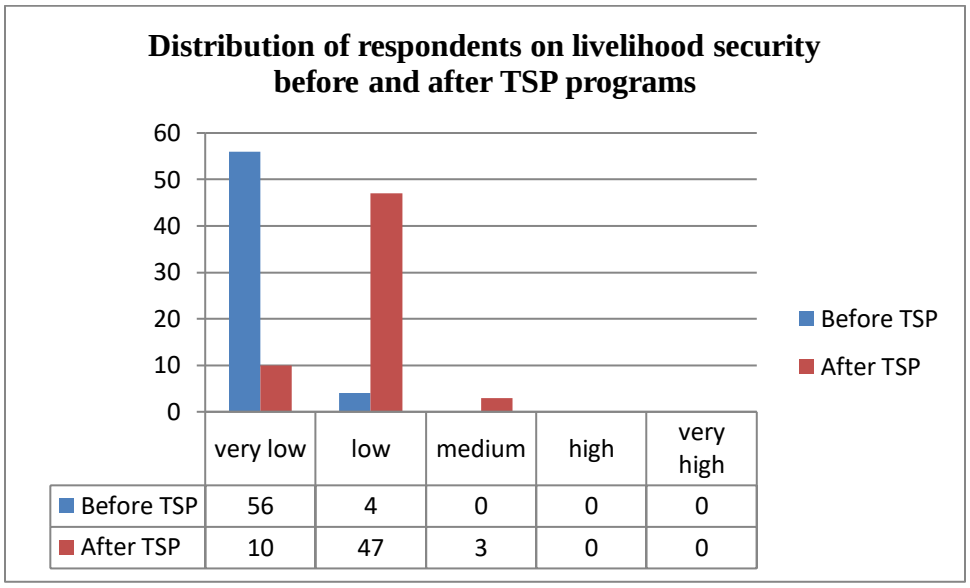
The result revealed that, the mean livelihood security index score for the respondents before TSP was 17.2052 with a standard deviation of 1.859. As shown in Table 4.5, the livelihood security index score before implementation of TSP among tribals varied from a range of 15.20-23.13. From table 4.5, we can observe that 93.33% of the respondents had very low Livelihood Security Index scores before TSP programs and 6.66% of the respondents were having low LSI scores. None of the tribals were having high scores for LSI.

Extent of livelihood security achieved by tribal respondents after the implementation of Tribal Sub Plan is detailed in Table 4.6.

Table 4.6: Distribution of respondents on Livelihood Security after TSP programs

Mean	28.0687	
Standard deviation	6.715	
Range	18.33-41.78	
Categories	**Frequency**	**Percentage**
Very low (0-20)	10	16.66
Low (20-40)	47	78.33
Medium (40-60)	3	5.00
High (60-80)	0	0
Very high(80-100)	0	0
Total	60	100.0

As per Table 4.6, the mean livelihood security index score for the respondents after TSP among tribals was 28.0687 with a standard deviation of 6.715. The livelihood security index score after the programme varied from a range of 18.33 to 41.78.



	very low	low	medium	high	very high
Before TSP	56	4	0	0	0
After TSP	10	47	3	0	0

Fig 4.9 Comparison of LSI

Changes had been found over livelihood security of the respondents before and after implementation of TSP programme as described in Fig 4.9. Majority of the respondents (93.33%) were found to be falling under very low livelihood security category before implementation of TSP. But after its implementation the percentage of very low category livelihood security became decreasing and percent on low category (47) became increasing.

4.4.1. Wilcoxon Signed Ranks Test

This test was conducted to check the significant difference between LSI before and after TSP projects as shown in table 4.7.

Table 4.7. Test Statistics of Wilcoxon Signed Ranks Test

Tests	**LSI after TSP - LSI before TSP**
Z	-6.73
Asymp. Sig. (2-tailed)	0.000

From the test statistics it can be understood that there is significant difference between the LSI scores of the respondents before and after the implementation of TSP projects (p value<0.05).

4.4.2. Comparing the LSI of tribal respondents in Wayanad, Idukki and Palakkad after the TSP projects

As per Table 4.8, no significant difference was found between the Livelihood Security Index scores of the three districts. From the test statistics, p value is not significant at 5% significance level. This points out that respondents of none of the districts have attained high or very high index scores.

Table 4.8: Kruskal-Wallis Test to compare LSI

Districts	N	Mean rank
Wayanad	20	26.50
Idukki	20	35.93
Palakkad	20	29.08

Table 4.9: Test statistics of Kruskal-Wallis test

Tests	LSI
Chi-square	3.113
Df	2
Asymp.Sig	0.211

The mean scores of Livelihood security index of Wayanad, Idukki and Palakkad are 26.50, 35.93 and 29.08 respectively as shown in Table 4.9. All these scores fall under the 'low' category of the index, which derives the conclusion that the three districts have attained similar level of livelihood security. Possession of less agricultural land, lack of employment opportunities, increased illiteracy makes their livelihood options blocked. Most of the tribals were depending on forest and forest products for their living. Observations made by Kumar (1998) supports this finding. He states that occupational status of Mudugas involves a combination of agriculture, daily wages and forest-based labor. The majority of Muduga houses followed a combination of daily wages and Non-Timber Forest Produce (NTFP)collection. Limited availability of land makes agriculture less possible for them.

Illiteracy is very high among the respondents which is a main factor that pulls their livelihood security downwards. The attitude of tribals towards education should be changed. Education will bring in change in their world view and give them hopes for a better tomorrow. Government is supporting the tribal students with all the measures possible. This is in line with the observation that the Government of Kerala is distributing educational concessions, scholarships and other kinds of assistance to the students from primary to postgraduate level (Chathukulam *et al.* 2013).

4.5 Socio- economic impact of selected TSP projects

Out of 60 respondents, 44 tribal farmers were beneficiaries under various programs.

4.5.1. Income

Income of the tribal beneficiaries before and after TSP programmes are compared in Table 4.10:

Table 4.10: Distribution of respondents based on their income

	Income before TSP		**Income after TSP**	
Category	**Frequency**	**Per cent**	**Frequency**	**Per cent**
Low	44	100.0	8	18.2
Medium	0	0	36	81.8
High	0	0	0	0
Total	44	100.0	44	100.0

As shown in Table 4.10, before the TSP projects, all the respondents placed themselves in the low-income category, but after the projects only 8 respondents belonged to the low-income group and they were not able to make any differences in their income levels, while others placed themselves in the medium level of income.

Table 4.11: Sign test to check the difference in income level

Tests	**Income after TSP projects - Income before TSP projects**
Z	-5.833
Asymp. Sig. (2-tailed)	0.000

From sign test statistics, it can be observed that there is significant difference in the income level of the tribals. p value< 0.05.

4.5.2. Production

Production of the tribal beneficiaries before and after TSP programmes are discussed in Table 4.12:

Table 4.12: Production of the beneficiaries

	Production before TSP		**Production after TSP**	
Category	**Frequency**	**Per cent**	**Frequency**	**Per cent**
Low	44	100.0	18	40.9
Medium	0	0	26	59.1
High	0	0	0	0
Total	44	100.0	44	100.0

Table 4.12 shows that after the TSP projects, 59% of the respondents were identified with increased production level. At the same time, 18 tribals were identified to have low production level. They pointed out crop loss and death of cattles and poultry birds as the reason of their low production.

Table 4.13: Sign test to check the difference in production level

Tests	**Production after TSP project- Production before TSP project**
Z	-4.903
Asymp. Sig. (2-tailed)	0.000

From the sign test, we can infer that there is significant increase in the production. The production can be crop production or production of poultry, cattle etc.

4.5.3. Savings

Comparison of the savings of the tribal beneficiaries are dealt in Table 4.14:

Table 4.14: Savings of the beneficiaries

	Savings before TSP		Savings after TSP	
Category	**Frequency**	**Per cent**	**Frequency**	**Per cent**
Low	44	100.0	10	22.7
Medium	0	0	34	77.3
High	0	0	0	0
Total	44	100.0	44	100.0

Savings of all the respondents before TSP projects fell into low savings category as depicted in Table 4.14. Thirty-four of the respondents were identified in the medium level of savings after the implementation of TSP projects. Around 23% of the respondents were not able to make changes in the level of their savings.

Table 4.15: Sign test to check the difference in savings level

Tests	**Savings after TSP project- Savings before TSP project**
Z	-5.659
Asymp. Sig. (2-tailed)	0.000

From the sign test, we can infer that there is significant increase in the savings of the respondents.

4.5.4. Education

Education level of the tribal respondents before and after TSP are discussed in Table 4.16:

Table 4.16: Education of the beneficiaries

	Education before TSP		Education after TSP	
Category	Frequency	Per cent	Frequency	Per cent
Low	32	72.7	32	72.7
Medium	12	27.3	12	27.3
High	0	0	0	0
Total	44	100.0	44	100.0

Educational level of the tribals does not mark any change after the implementation of developmental programmes. It has remained the same. As per Table 4.16, out of the 44 tribals, 72.7 per cent are having low education, which means they are either illiterate or have gone to

school only up to the primary classes. The rest 27.3 per cent of them have acquired medium level education. This indicates upper primary and high school education.

Table 4.17: Sign test to check the difference in education level

Test	**Education level after TSP project- Education level before TSP project**
Asymp. Sig. (2-tailed)	1.000

The educational level of the respondents did not mark any change after the TSP projects. There was no significant difference as p value (1) is greater than 0.05.

4.5.5. Social participation

Social participation of the tribal beneficiaries before and after the TSP programme are shown in Table 4.18:

Table 4.18: Social participation of the beneficiaries

	Social participation before TSP		**Social participation after TSP**	
Category	Frequency	Per cent	Frequency	Per cent
Low	32	72.7	14	31.8
Medium	10	22.7	21	47.7
High	2	4.5	9	20.5
Total	44	100.0	44	100.0

From Table 4.18, it can be observed that TSP programs had a good influence in changing the level of social participation of tribals. After the TSP projects, more than 20% of the respondents rated themselves to high level of social participation and 48% of the respondents to medium level. Only 14 respondents were in the low social participation category.

Table 4.19: Sign test to check the difference in social participation

Test	**Social participation after TSP project - Social participation before TSP project**
Exact Sig. (2-tailed)	0.000

From the sign test, we can observe that there is significant increase in the level of social participation of the respondents after the implementation of the programme.

4.6. Social and institutional constraints in the implementation of TSP projects

The following eight constraints were faced by people's representatives of the different panchayaths and they have made a ranking on them. The ranks are shown in Table 4.20:

Table 4.20: Social and institutional constraints

Constraints	**Rank**
Poor communication facilities	1
Illiteracy of tribals	2
Problems in accessibility	3
Delay in receiving funds	4
Absence of co-operation	5
Low beneficiary participation	6
Non-transparent beneficiary selection	7
Non-utilization or diversion of funds	8

From the analysis, it is found that there is high degree of concordance among people's representatives in ranking the constraints. This can be inferred from Table 4.21.

Table 4.21: Kendall's Co-efficient of Concordance test to check the degree of agreement in ranking the constraints

Test	Value
Frequency(N)	60
Kendall's W[a]	0.506
Chi-Square	212.576
Df	7
Asymp. Sig.	0.000

As the computed *p*-value is less than the significant level ($p < 0.01$), it can be inferred that there was high degree of concordance between the constraints listed.

By the present study, 'poor communication facilities', 'illiteracy' and 'problems in accessibility' were ranked as the major problems by respondents. According to them communication is very limited with the tribal groups like Kadar, Kattu Naikkan and Chola Naikkan who stay in deep forest areas. Such tribals belong to the category of Particularly Vulnerable Tribal Groups (PVTGs) or Primitive Tribal Groups. This result is similar to the findings of Ramu (1997) that constraints for tribal development during 1990s with relative importance were lack of credit institution, poor infrastructure facility, lack of communication facility, inadequate marketing, lack of storage and processing facility, non-availability of credit.

While some Scheduled Tribes have adopted a mainstream way of life at one of the spectrums, there are groups even now, at the other end, which are characterized by forest-based livelihoods, pre-agriculture level of existence, a stagnant or declining population, extremely low literacy and a subsistence economy. Such endogenous groups called Particularly Vulnerable Tribal Groups exhibit strong hesitation in interacting with the outsiders. This makes it a tough task for the government officials or social workers to communicate with them.

Illiteracy is another important issue that has to be reduced for the smooth implementation of the projects. It is identified as an illful agent in the implementation of the developmental programmes. Lack of education makes it hard for tribals to get to know about the developmental

schemes. Very few numbers of tribal students make use of the educational facilities provided by the government. Most of them stops their entry to schools after a certain age. This is in line with the observations of Jalaja and Kala (2015) that Illiteracy, poverty, and unemployment are the common problems faced by the tribals in Attappady tribal block which makes them largely isolated from the mainstream of life and development. It is also supported by the fact that 30% of the tribes in Wayanad are illiterates, out of which majority are women (Kerala State Literacy Mission, 2015).

Non- availability of funds was considered as another significant issue by the respondents. When the availability of funds is made late, it may affect the implementation of different programmes. This is in line with the findings of Seema (2002) that non-availability of physical and financial inputs along with the inefficiency of officials pulls back the implementation of such development programmes.

Lack of co-operation and participation were also observed as constraints by the respondents. If the targeted users of these schemes have less interaction with the implementing agency, it would be difficult to get into their issues. Their remote stay and unapproachable nature make it tough for the external agents to make them understand about developmental schemes and its benefit in their life style.

Only when there is a good representation of the tribal beneficiaries in the planning process, the base level issues can be resolved. According to people's representatives who were interviewed, even though there is an increase in number of tribals who attends the Oorukoottam meetings held at tribal hamlets, some tribals are still reluctant in participating in such programmes which discusses their problems and needs. This reveals the false belief of the tribals that the authorities are partial and only certain people gets the benefits out of the plans and programmes. This is similar to the findings of Oomen (2009) that lack of transparency is the main issue associated with the services related to welfare measures for the scheduled tribes. He adds that the many of the actual beneficiaries who deserve assistance are sidelined in this process and elected ward members and *oorukoottam* leaders are often subjected to pressures to yield individual requests.

Non-utilization of funds tends to be the least influencive constraint. Respondents have mentioned that there are very rare instances when the fund goes unutilized and the TSP funds are not diverted for any other developmental purpose.

4.7 Status of extension interventions

Extent of the contact of respondents with extension officials was included in the study. This includes their interactions with Village Extension Officer (VEO), Tribal promoters, Tribal Extension Officer (TEO), Tribal Development Officer (TDO) etc. Such interactions are depicted in Table 4.22:

Table 4.22: Distribution of respondents based on their contact with extension personnel

Categories	Frequency	Percentage
Never	21	35
Often	35	58.3
Very often	4	6.7
Total	60	100

Communication of tribals with extension personnel like Tribal extension officers, Tribal promoters, Tribal development officers, NGOs, was rated. 35% of the tribals didn't had any contact with any extension persons as shown in Table 4.22. Around 58% of them have come across extension officers oftenly and 4 respondents meet them very oftenly. Results of the study shows that the respondents have less interactions with the extension agents, which needs to be improved. This point is underlined by the following finding that there is a requirement of elevated efforts from the part of extension agencies to purpose the tribal farmers to undertake new agricultural technology thereby, leading to an increase in their demand for credit (Pathi and Panigrahi, 1998).

When asked about their contacts with extension agents tribals in Pudur expressed that they communicate with tribal promoters and the NGOs and this is the condition in all the panchayaths. Majority of the tribals have interactions only with tribal promoters. Similar kind of observation was made by the IAAITA in MP (2003). According to the report, tribals makes very

less interactions with the outsiders, including the agricultural scientists, making their development limited.

When the Oorukoottam meetings are held, tribals gets into interaction with tribal promoters and they express their needs to them. Interactions with tribals are made more fruitful in such local groups. To foster their bonds with the authorities, base level addressal of the problems is a necessity. This point is supported by the suggestion given by Seema (2002) that grass root level extension functionaries may initiate the functioning of settlement wise micro-groups with properly identified tribes and their leader so that periodic discussion about the nature of schemes can be done which enable them to get proper appraisal about their needs and its rectification then and there.

4.8 Status of empowerment of tribals

While analyzing the empowerment status of tribals, no notable change was observed. In all the three districts, most of the respondents fell under the low empowerment category. The results are shown in Table 4.23:

Table 4.23: Distribution of respondents based on empowerment index score

Categories	**Wayanad**		**Idukki**		**Palakkad**	
Mean	37.05		39.4		37.3	
Standard deviation	4.72		5.39		5.67	
C.V(%)	12.74		13.68		15.20	
Minimum score	29.64		29.36		28.36	
Maximum score	46.32		47.37		46.42	
Category	**Frequency**	**Percentage**	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Very low (28-32)	2	10	5	25	7	35
Low (32-36)	10	50	3	15	4	20
Medium (36-40)	3	15	4	20	3	15
High (40-44)	4	20	5	25	4	20
Very high (44-48)	1	5	3	15	2	10
Total	20	100	20	100	20	100

When the empowerment index of respondents of Wayanad were analysed, 10% of them were in very low category and 50% of them in the low category of empowerment. Table 4.23 shows that 15% of the respondents were included in the medium category and 20% in high empowerment category. Only one person fell in the very high category. The empowerment index score varied from 29.64 to 46.32. In Idukki, the range of empowerment index score varied from 29.36-47.37. 25% of the tribals were 'very less empowered'. 15% were in low empowerment category, 20% of them in medium category and another 25% of them fell in the highly empowered category. Only 3 members have got very high level of empowerment. Palakkad has got majority of the respondents in the 'very low' empowerment level. Out of the 20 respondents from Palakkad, 7 of them were included under this category. 20% of the respondents were in low empowerment category, 15% of them in medium category and 20% of them in high category. Out of the 20 respondents only 2 respondents were in the very high category. While comparing the three districts we can understand that it is in Palakkad, majority of respondents possess very low empowerment. Only very few of the tribals have attained high level of empowerment in all the districts. This agrees with the observations of Sindhi (2012). She stated that farming can support the empowerment of tribals, particularly that of the tribal women. The farm forestry program in Gujarat has prevented the migration of the tribals by increasing the employment options. According to her, the supply of seed materials to tribal women has increased their confidence level. Orissa Tribal Empowerment and Livelihood Programme (OTELP) also came up with a similar kind of empowerment among the tribals. Livelihood and food security of the poor tribal households are met by promoting a more efficient, equitable, self-managed and sustainable exploitation of the natural resources at tribal people's disposal through off-farm and non-farm enterprise development.

4.8.1 Comparison of respondents of three districts based on their empowerment index scores by Kruskal-Wallis test

Based on the test no significant difference was found between the empowerment index scores of the respondents. p value > 0.05. Table 4.24 shows that similar level of empowerment was achieved by the respondents in three districts.

Table 4.24: Test statistics of Kruskal-Wallis test

Tests	Empowerment index score
Chi- square	2.070
Df	2
Asymp.sig	0.355

Table 4.25: Ranks in Kruskal-Wallis test

Empowerment Index Score	N	Mean rank
Wayanad	20	28.70
Idukki	20	35.05
Palakkad	20	27.75

4.9 Extent of participation in developmental activities

Tribals tend to have reluctance towards public meetings. But they have expressed that they prefer to raise their voice in oorukoottam gatherings. The level of participation of the tribals is shown in Table 4.26:

Table 4.26: Distribution of respondents based on their participation in developmental activities

Categories	Frequency	Percentage
No membership	36	60
Member	19	31.7
Office bearer	5	8.3
Total	60	100

The participation of tribals in different organizations was analyzed. 60% of them are not even members in any organizations or developmental groups as per Table 4.26. This is in line with the findings of Marimuthu (2001) that a vast majority of the tribal respondents had medium level of participation in developmental programmes. Recommendations to improve this condition were made by NSMARDP (1985) that planning of research and development in agriculture should have combined contributions of farmers, extension personnel and the scientists at the local and other levels to make the suitable technologies for various farming situations and different

categories of clients and to attain their greater participation. Appropriate mechanism should be developed to involve all these three categories in this process.

Out of the 19 respondents who are members in various institutions, majority are associated with Kudumbashree units. Kudumbashree has its significant role among tribal women. Kudumbashree Mission is getting strong among the tribal population in Kerala. Out of the 127987 tribal families in Kerala, 106162 families are active members of Kudumbashree NHGs. It was found out from the tribal survey that 5962 NHGs are actively participating in the tribal areas (GOK, 2018). Wayanad district has the maximum number of tribal kudumbashree units. Out of 60 respondents, only 5 were working as office bearers.

4.10 Awareness of tribals on development programs

Level of awareness of tribals on different developmental programmes was studied. The following are the results (See Table 4.27):

Table 4.27: Distribution of respondents based on their awareness on different tribal development programs

Sl. No.	Schemes	Aware	
		Frequency	Percentage
Crop cultivation			
1	Crop subsidy	42	70
2	Agricultural credit	30	50
3	Supply of seed materials	31	51.7
4	Fertilizer supply	27	45
Animal husbandry			
5	Cattle distribution	33	55
6	Dairy development schemes	39	65
7	Poultry distribution	32	53.3
8	Goat distribution	38	63.7
Farm mechanization			
8	Distribution of grass cutters	28	46.7
9	Subsidy provision for tractor	22	36.6
10	Spray pump distribution	16	26.7

Tribals were asked about their awareness on various developmental programs and their responses were noted. Majority of the respondents were aware about crop subsidies ie.,70%, 50% were

aware about agricultural credit. As detailed in Table 4.27, out of 60 respondents 31 knew about the supply of various seed materials and only 27 knew about the supply of fertilizer materials. When asked about different animal husbandry schemes, 55% are aware about cattle distribution, 65% about dairy development schemes, 53.3% about poultry distribution programs and 63.7% knew about goat distribution. Very less number of respondents were aware about schemes on farm mechanization. Very few knew about distribution of spray pumps. Only 16 farmers. 46.7% were aware about grass cutter distribution and 36.6% were aware about providing tractor subsidies. A large number of tribals are aware about the subsidy schemes for crops. 70% of them are aware about the crop subsidies.

It is interesting to know that many of the respondents are aware about the various animal husbandry schemes. Most of them are getting poultry birds, cattle and goats from the panchayath under the TSP projects, adding to the increased awareness on such schemes. This finding is supported by the observations of (Zacharias, 2003). According to this author, milch cows and goats were supplied to 'Kadar' group of tribes during various plan periods which was found to have an increase in their income levels.

Not only men but also tribal women were confident to take up the agriculture allied activities. Tribal women were interested in rearing poultry birds, which can add up to their family income. This is underscored by the observation of Raghavan (2006). He reported that tribal women in Wayanad took active participation in poultry production. At the same time, very few are aware about distribution of different farm machineries.

Education of the tribals is a significant factor when it comes to the awareness about development programmes. As underlined by the findings of Praveen (2009), level of education has a strong influence on the awareness of the community about the various welfare and development programmes implemented by the central, state and local governments. It is found that the educated have a fairly good awareness of the welfare programmes aimed at the tribal communities.

Increased awareness about tribal development programs may result in increased participation in such programs by the tribals. Oommen (2002), supporting the above findings states that the local educational institutions, panchayats and the voluntary agencies should be adequately involved by the project officials in undertaking awareness drives in tribal villages regarding the benefit schemes. State Governments shall take initiatives to generate awareness among the general public about the schemes to be implemented/being implemented for the development of STs by the different departments through electronic and print media.

In contrary to this Baiju (2011) concludes that Local Self Government Institutions (LSGIs) and development departments have limitations in spreading the awareness on development schemes in the interior and remote settlements whereas the 'Oorukoottams' and the tribal leaders can take the initiative through the local dialect, indigenous cultural shows and dissemination of success stories.

4.11 Perceived efficacy of implementation of TSP projects

From the six panchayaths, people's representatives were asked about their perception on the implementation of various projects under Tribal Sub Plan. Their perception about various factors like beneficiary selection, distribution of financial and material aids, maintaining the activities, feedback and follow up.

4.11.1 Beneficiary selection

People's representatives were distributed based on their perception on beneficiary selection as shown in Table 4.28:

Table 4.28: Distribution of people's representatives based on their perception on beneficiary selection

Category	Frequency	Percentage
Very poor	0	0
Poor	0	0
Normal	0	0
Good	30	50.0

Very good	30	50.0
Total	60	100.0

When the people's representatives were interviewed to rate their perception on beneficiary selection, 50% of them opted 'very good' way of selecting the beneficiaries and another 50% agreed for 'good'. In all the panchayaths, beneficiaries for various programs are found by conducting the Oorukoottam meetings and thus tribal beneficiaries are selected in a right way.

4.11.2. Distribution of financial and material aids

Distribution of people's representatives based on their perception on distribution of financial and material aids is shown in Table 4.29:

Table 4.29: Distribution of people's representatives based on their perception on distribution of financial and material aids

Category	Frequency	Percentage
Very poor	0	0
Poor	0	0
Normal	24	40.0
Good	26	43.3
Very good	10	16.7
Total	60	100.0

Among the respondents only 16.7% said that distribution is done in very proper manner. Majority of them said that they distribute the financial and material aids evenly to the tribals (43.3%). 40% of the people's representatives said that the distribution of funds is done in a normal way. Respondents of Thavinhal panchayath added that distribution of seed materials and poultry is done through the tribal Kudumbashree units which are functioning effectively in the area.

4.11.3. Maintaining the activities

Distribution of people's representatives based on their perception on maintaining the activities is shown below (See Table 4.30):

Table 4.30: Distribution of people's representatives based on their perception on maintaining the activities

Category	Frequency	Percentage
Very poor	0	0
Poor	0	0
Normal	9	15.0
Good	36	60.0
Very good	15	25.0
Total	60	100.0

Majority of the people's representatives have 'good' perception about maintaining the activities (60%). 15 respondents told that the activities are taken up in a 'very good' way whereas 9 members opted for 'normal'. With the help of tribal interaction, respondents get updated with the status of ongoing projects. Supply of further resources based on their need makes the activities in good going. Majority of the people's representatives informed that they provide resources and capital as per demand.

4.11.4 Follow up

Distribution of people's representatives based on their perception on follow up activities is discussed in Table 4.31:

Table 4.31: Distribution of people's representatives based on their perception on follow up activities

Category	Frequency	Percentage
Very poor	0	0
Poor	0	0
Normal	21	35.0
Good	29	48.3
Very good	10	16.7
Total	60	100.0

All of the respondents have told that they have been taking up the follow up activities. Majority of them (48%) is taking up the follow up activities in a good way.

4.11.5 Feedback

Distribution of people's representatives based on their perception on feedback are shown below (See table 4.32):

Table 4.32: Distribution of people's representatives based on their perception on feedback

Category	Frequency	Percentage
Very poor	0	0
Poor	0	0
Normal	35	58.3
Good	21	35.0
Very good	4	6.7
Total	60	100.0

Majority of them responded that there are getting the feedbacks, but not from all the beneficiaries. As per Table 4.32, 6.7% of them said that they are getting regular feedbacks. Getting regular feedback from tribals is a difficult task as they have limited communication with the outer world. There are tribal groups who reside inside the deep forests. Under such circumstances, collecting feedback will be troublesome. But in panchayaths like Edavaka and Thavinjal, tribals are more social and they live in tribal colonies, which makes it easy to get the feedback.

4.12. Socio-economic profile of the respondents

4.12.1. Gender

Out of the 60 respondents, 35 were male (58.3 per cent) and 25 were female (42 per cent). Similarly, 39 out of 60 people's representatives (65 per cent) were found to be male and 35 per cent were female.

Table 4.33: Distribution of respondents based on gender

	Tribal respondents		People's representatives	
Category	Frequency	Percentage	Frequency	Percentage
Male	35	58.3	39	65
Female	25	41.7	21	35
Total	60	100.0	60	100

The sample drawn randomly from the tribal respondents and people's representatives shows that participation of women in the administrative system is less compared to that of men. The findings of the study are supported by the observation that though the progressive 73rd Constitutional Amendment has created a pathway for women to come into the public sphere, if we look at the status of women and their participation in self-governance systems, both are still low, and sometimes elected women are merely figureheads (Oommen, 2009).

There is a mandatory 50 per cent participation of women in local self-government institutions. India probably became the first country to reserve 50 per cent seats for women at local self-government (LSG) level after the approval of a proposal by the Union cabinet for a constitutional amendment bill to increase quota for women at all tiers. This was made by the government to facilitate the entry of more women into public sphere and to make the local self-government institutions more inclusive, as stated by Menon and Sinha (2009).

4.12.2. Age

It is reported that age of an individual decides his mental maturity, decision-making capability and finally involvement and participation in development schemes. Inorder to find out the distribution of respondents across age groups, respondents were categorized into three groups *viz*. Young (< 35 years), middle aged (35-55 years) and aged (>55 years).

Table 4.34: Distribution of respondents across age groups

	Tribal farmers		**People's representatives**	
Category	**Frequency**	**Percentage**	**Frequency**	**Percentage**
< 35 years	20	33.3	19	31.66
35-55 years	27	45.0	33	55.00
>55 years	13	21.7	8	13.33
Total	60	100.0	60	100.00

It was found that tribal respondents were either middle aged or young. Out of the tribal respondents, 33.3 per cent were young and 45 per cent belonged to middle aged category. The

sample didn't include aged tribals in large numbers. Only 21.7 per cent of the tribal farmers belonged to this group. This is in line with the findings of the study conducted by Sripal (1983) that one-third of the tribes in kerala are middle aged and nearly two-fifth of them belongs to young age group.

Similarly, majority of the people's representatives were also middle aged.ie.,55 per cent. The per cent of aged members was very less. Young members constituted 31.66 per cent.

4.12.3. Family type

On the basis of the nature of family, tribal respondents were categorized into two groups; Nuclear family and Joint family as shown below:

Table 4.35: Distribution of respondents based on family type

Category	Frequency	Percentage
Nuclear family	38	63.3
Joint family	22	36.7
Total	60	100

It is understood from the table that 63.3 per cent of the respondents were found to live in nuclear family system and only 36.7 per cent of the respondents adhere to joint family system. It is evident that there has been a gradual disintegration of the joint family system and emergence of nuclear family among the tribals. This discussion underlines the findings of Fuchs (1973) who observes that a tribal family having more numbers to feed with limited resources struggles to live and a small sized family with a manageable income could withstand the times of economic and employment shocks. As reported by him, no uniformity in family pattern could be discovered among the primitive tribes of Southern India as most of the tribes have been strongly influenced by their neighbours who are more advanced in culture.

4.12.4. Education

Based on educational levels, tribals were grouped as ‘illiterate’, ‘functionaly literate’, ‘primary school education’, ‘secondary school education’ and ‘graduates and above’.

Details of the distribution of tribals across various educational categories are given below:

Table 4.36: Distribution of respondents based on levels of education

Category	Frequency	Percentage
Illiterate	27	45.0
Functional literate	13	21.7
Primary education	13	21.7
Secondary education	7	11.7
Graduate and above	0	0
Total	60	100

As seen in table, 45 per cent of the respondents were illiterates, who can’t read or write. While 13 respondents were found to be functional literates, 13 respondents had gone to school upto the level of primary education and only 7 of them had gone upto the level of secondary education. It is important to notice that none of the 60 respondents were graduates. Here discussion points to the huge gaps in the literacy levels of tribal farmers. The results of the study converge to the point of Nagda (1998) that the school drop-out problem is severe in tribal areas and about two-third of the students leave the school at the level of primary stage of education. He also added that most tribals tend to use their children for ancillary services so that it would bring additional income for their starving families. Tribals have recently begun sending their boys to school, whereas the girls are generally not encouraged to do so. Most of the settlements are located deep within thickly forested areas. There are a few single classroom primary schools located in interior settlements. However, most children have to stay in tribal hostels in order to attend classes. But many children are reluctant to be separated from their parents and village for very long. This has been the general trend in the country and in Kerala.

But at the same time, government is providing all the facilities to elevate the tribal literacy levels. The above statement is in line with the report of Singh (1982) that in all the five-year plans, priority was given to educational development of Scheduled tribes.

Kerala has been particular in concentrating on educational development of tribal county, in tandem with the achievement in educational accomplishments by the other sections of the country. It is reported that, major chunk of the non-plan expenditure of the Scheduled Tribes Development Department had been spent on educational development activities including scholarships, boarding and lodging charges, incentives to the parents etc. Even though government had spent huge sum of money to improve the education status of tribals, it has not been able to make substantial changes as desired (Singh, 1982). The table shows that more premature efforts have to be taken up to bring more people into the mainstream of education, including professional education. Indicators of educational development has to be closely observed to make the interactions in this sector more effective.

4.12.5. Occupation

Table 4.37: Distribution of tribal farmers based on occupation

Categories	Frequency	Percentage
No occupation	22	36.7
Agricultural labour	11	18.3
Farming alone	4	6.7
Farming+ Agriculture related occupation	11	18.3
Nonagricultural labour	12	20.0
Total	60	100

From the table it is observed that 36.7 per cent of the tribals did not possess any occupation. They were mostly tribals who did not engage in any economic activity, but restricted themselves to their homes. This group mainly included aged tribal people and tribal women. This agrees with the findings of COI (2011) that out of the total Scheduled tribe population of 10.45 crore in India, only 5.08 crore tribals were engaged in various occupation. The table shows that around

18 per cent of the respondents repeatedly worked as agricultural labourers. These people did not have their own farm land. However, 15 respondents were found to be involved in farming related occupations. Out of the tribal farmers selected for the study, 20% of the respondents were non-agricultural labourers. This agrees with the observations of Nayar (1985) that many of the tribals are not good farmers. They have neither the knowledge nor the patience for doing cultivation. Nor do they know the agencies which give farm subsidy or farm inputs free or at subsidized rates or the rules and regulations and other procedural formalities for getting them. Findings of Oommen (2002) is in agreement with this. Tribals will be very happy if, under this circumstance, some exploiting intermediary either tries to get their land on lease or for sharecropping or promises to procure government assistance on a commission (a costly commission indeed). None of the assistance reach to the tribal directly and in their entirety. A huge portion is deducted before it reaches their hands.

Tribals had been compelled to do low income occupations, inferior trades and menial jobs in unhygienic environments. Their occupational activities of revolved only around to meet the food requirement and they were unaware of developments in other aspects. Here observations points to the fact that occupational diversity has to be ensured among tribals.

4.12.6. Annual family income

In the study, tribals were categorized into five groups based on their annual family income. 85% of them have their annual income less than Rs.22,500. Only 9 respondents were recorded with their annual income in the range of Rs.22,500 – Rs. 45,500.

Table 4.38: Distribution of respondents based on their annual income

Category	Frequency	Percentage
Lower (lesser than 22,500)	51	85
Lower middle (22,500 to 45,000)	9	15
Middle (45,001 to 66,000)	0	0
Upper middle (66,001 to	0	0

96,000)		
Higher (more than 96,000)	0	0
Total	60	100

The result shows that lion share of the tribals belong to the lower income category. This finding is in line with the report of PIB (2018) based on the latest national data. The report speaks that Scheduled tribes are India's poorest people, with 5 of 10 falling in the lowest wealth bracket, which is again in agreement with the findings of National Family Health Survey (2005-06) showing the following results: 45.9% of scheduled tribe members were in the lowest wealth bracket compared to 26.6% of scheduled castes, 18.3% of other backward caste, 9.7% of other castes.

4.12.7. Total landholding

The concept of land holding has come up among the tribes since then they have shifted from primitive to shifting and now to sedentary agriculture.

Table 4.39: Distribution of respondents based on their landholding

Category	Frequency	Percent
Marginal farmer	49	81.7
Small	11	18.3
Medium	0	0
Big	0	0
Total	60	100

From the table, we can observe the landholding status of tribals. Around 82% of them belong to the marginal farmer category (0-1 ha land). Only 11 respondents said that they have a landholding of 1-2 ha. None of the tribal farmers possess a landholding of medium or large size.

The observations made under the study agrees with that of Mohanty (2001) that even after 50 years of planned initiatives and policy measures, there has not been substantial improvement in the landholding status of scheduled tribes.

The economic status of tribals depends largely on the size and quality of land, which they hold and cultivate. But vast area of land was taken from them by non-tribals by meager money offerings. Large number of tribals have lost their land in this way. This is supported by the observations made by Nair (1985) that during the decade 1967-1976, tribal families lost their land, nearly 10,000 acres as a result of alienation and major share of this area was alienated to non-tribals.

Two-third of the land alienation was made for meeting their family expenditure including medical treatment and one-fifth for clearing debts. Land alienation is considered as the pivotal issue of the tribals in Kerala at present. A good number of the tribals have become landless over the years on account of various pressures, financial compulsion and often pressure from non-tribals.

4.13. Binary logistic regression analysis

Binary logistic regression analysis was conducted to predict the the chances of tribals to avail the benefits of Tribal Sub Plan or not using the information on their gender, age, family type, education, occupation, annual income, landholding, extension agency contacts and extent of participation in developmental activities.

Table 4.40 Odds of the tribals to be a beneficiary with respect to demographic variables

Variable	B	S. E.	Wald	Df	Sig.	Exp(B)	Probability
Gender	-.158	1.223	.017	1	.897	.854	0.46
Age	-.562	.648	.752	1	.386	.570	0.36
Family type	.748	.830	.812	1	.368	2.112	0.67
Education	-.800	.455	3.083	1	.079	.449	0.30

Occupation	-.267	.360	.548	1	.459	.766	0.43
Income	-2.282	1.454	2.463	1	.117	.102	0.09
Landholding	1.049	1.129	.864	1	.353	2.855	0.74
Extension agency contact	.423	.669	.400	1	.527	1.527	0.60
Participation in developmental activities	2.081	.861	5.839	1	.010	8.012	0.89**
Constant	3.615	3.792	.909	1	.340	37.169	0.97

** significant at 1 per cent level

The data was collected from 60 tribal respondents out of which 44 respondents were identified as beneficiaries under different TSP programs. By this analysis, the extent of influence of the 9 independent variables on the chance of becoming TSP beneficiaries is understood.

From table 4.33, the variable 'participation in developmental activities' has got a p value = 0.01, which is significant at 1 per cent level.

The B values in the table are the values for the logistic regression equation for predicting the dependent variable from the independent variable. They are in log-odds units. These estimates tell the amount of increase (or decrease, if the sign of the coefficient is negative) in the predicted log odds that would be predicted by a 1-unit increase (or decrease) in the predictor, holding all other predictors constant.

The odds ratio of the variable 'participation in developmental activities' is 8.012 and the corresponding probability is 0.89. Taking a 50 per cent chance of any tribal to

become a beneficiary (ie., at existing probability p = 0.5), for every unit increase in the level of the variable ‘participation in developmental activities’, there is a chance of p = 0.39(0.89 – 0.5).

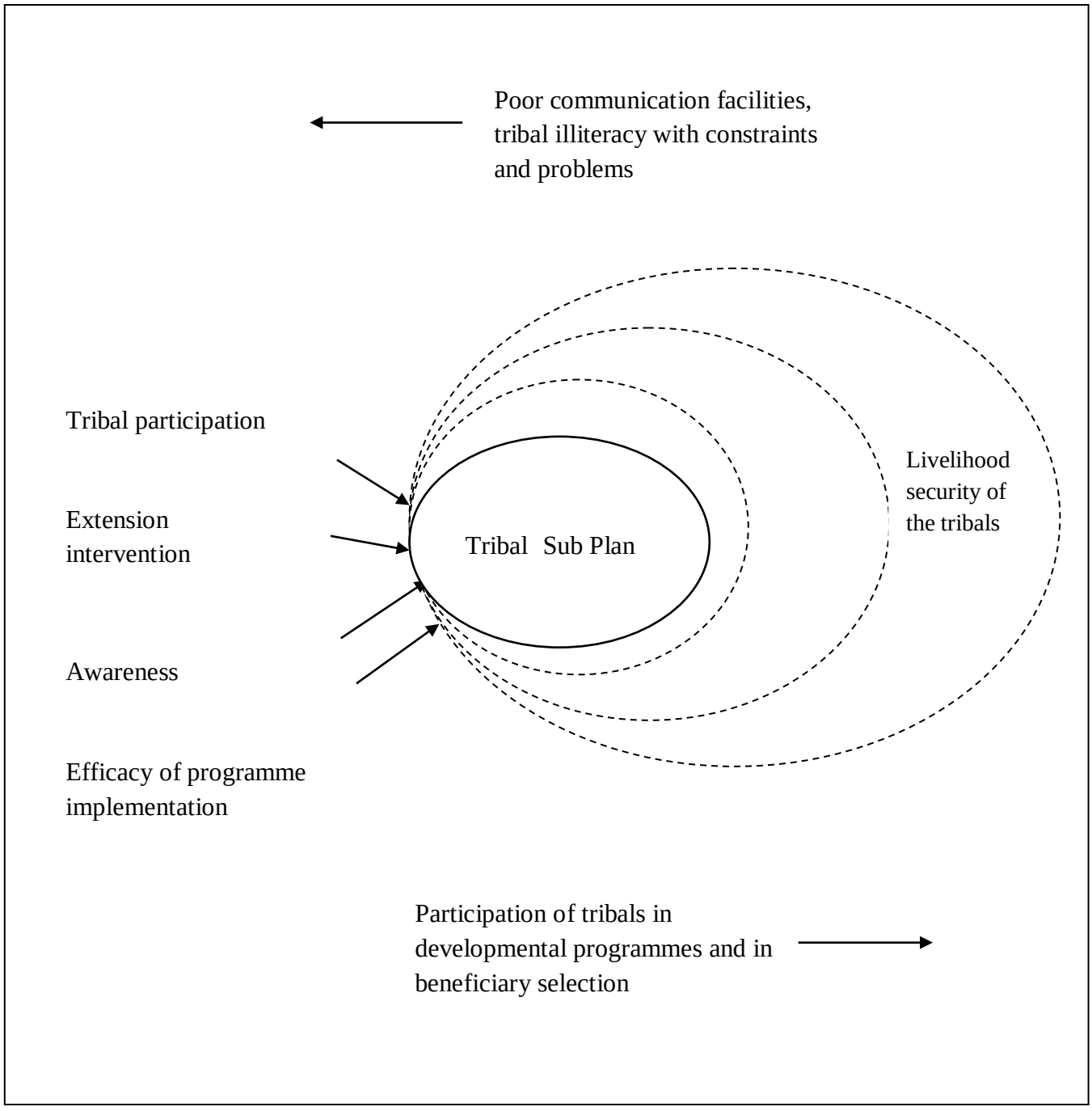


Fig. 10. Empirical model of the study

Summary & Conclusion

Chapter 5
Summary and Conclusion

5.1. Introduction

Despite the dedicated efforts for the upliftment of Scheduled Tribes over the years, they continued to face multiple developmental problems, which could clearly not be addressed through the general welfare schemes and programmes that had been in place. The persistence of socio-economic backwardness of the STs, demanded a special and focused strategy, which enables them to share the benefits of overall economic growth in a more uniform manner. In order to ensure direct policy driven benefits for STs through specific interventions, the Planning Commission during the 1970s introduced the Tribal Sub Plan (TSP).

The main objective of TSP is to channelize plan funds for the development of the tribal population in accordance with their proportion in the total population. Under these strategies, plan funds were earmarked for Scheduled Tribes (through TSP) under separate budget heads (budget head 796) for each ministry implementing Tribal Sub Plan. These strategies could include allocations for area-oriented programmes benefitting tribal hamlets or designing new appropriate developmental programmes for the development of these groups.

In Kerala, separate tribal sub-plan for tribal areas was implemented from 1976 onwards. The development blocks having more than 50 per cent tribal concentration were identified and special plans were prepared for them. In that way, five geographical regions with considerable tribal population were identified and declared as sub-plan areas and for each of these regions, special projects (Integrated Tribal Development Projects) were prepared. These projects were later revised to cover the dispersed tribal population around these areas.

State government has been implementing wide range of self-employment schemes, including training programmes and farming projects to improve the livelihood status of tribals around the

state. Major employment oriented tribal development programmes in the state includes providing financial assistance to group farms, setting up of Kudumbashree units in tribal areas and financial assistance to tribal voluntary organizations.

5.2. Objectives of the study

- To outline the changes in the administration of Tribal Sub Plan (TSP) of Kerala since 1976.
- To examine the pattern of outlay and utilization of TSP funds in the agricultural sector in selected Grama Panchayaths during 2015-17 and the livelihood options opened up by TSP projects.
- To assess the socio-economic impact of TSP projects in the agricultural sector.
- To identify the social and institutional constraints in the implementation of TSP projects.

5.3. Research Methodology

The study was conducted in three districts of Kerala - Wayanad, Idukki and Palakkad. These districts were purposively selected as they are home to majority of the tribal population in the state. From Wayanad, Idukki and Palakkad, 2 panchayaths with maximum tribal population were selected. The sample of respondents included 60 tribal farmers and 60 people's representatives, making a total sample size of 120. Structured interview schedule was used for collecting data from the respondents. Appropriate descriptive and inferential statistical tools were used for data analysis.

5.4. Major findings of the study

5.4.1. Institutional changes in the administration of TSP in Kerala

- Tribal welfare activities of the state were carried out under Scheduled Caste Welfare Department till 1975. As per the direction from central government, a separate procedure for utilization of funds under Tribal Sub Plan was introduced in Kerala in the fifth five-year plan period. All development blocks with more than 50 per cent tribal concentration were identified and special plans were prepared for them and District level working groups were formed for the administration of ITDPs.

- To monitor the functioning of TSP projects, committees were constituted at the district and block levels. District level monitoring committee for TSP works under the chairmanship of District Collector with all the district level officers as its members. Under the working groups TSP funds were spent through the departments on schemes which were prepared at the district level and approved by the working group.
- With the introduction of decentralized planning program in Kerala, tribal development in the state became more participatory in its approach. Decentralization of Tribal Sub Plan resulted in improving in the allocation of plan funds and project implementation. During 1997-2002, a major step was taken towards democratic decentralization by devolving the planning of TSP to local self-governments and the plan funds were earmarked in proportion to the tribal population. From 1997, the system of providing notional flow of funds was discontinued.
- Instead of normal gramasabhas, 'oorukoottams' or tribal gramasabhas were organized in tribal settlements for identification of projects, selection of beneficiaries etc.
- In 2001-02, administration of Tribal Sub Plan was taken away from the local governments and was given to the Tribal department. But later in 2003, TSP administration was fixed back to the local government bodies. Based on experience, this division has been resumed from 1-4-2003 and one half of Tribal Sub Plan budget was earmarked to Local Self Government Institutions.

5.4.2. Pattern of outlay and expenditure of TSP funds in the agricultural sector

- In all the 6 panchayaths funds were allotted for crop cultivation, animal husbandry and poultry programs. But the fund distribution for irrigation and farm mechanization programs was not continuous.
- Under farm mechanization programs grass cutters and spray pumps were distributed. Funds allotted for crop cultivation includes funds for crop subsidy, seed materials and fertilizer supply.
- Poultry programs and animal husbandry programs were given importance as tribals have more demand for it.

5.4.3. Socio- economic impact of selected TSP projects

- There was significant difference in the income level of the tribals. Before the projects, all the respondents placed themselves in the low-income category, but after the projects only 8 respondents belonged to the low-income group.
- Production showed a positive change. After the TSP projects, 59% of the respondents were identified with increased production level.
- Savings of all the respondents before TSP projects fell into low savings category whereas 34 of the respondents were identified in the medium level of savings after the implementation of TSP projects.
- TSP programs had a good influence in changing the level of social participation of tribals but the educational level of the respondents did not mark any change.

5.4.4. Social and institutional constraints

- By the present study, 'poor communication facilities', 'illiteracy' and'problems in accessibility' were ranked as the major problems by respondents.
- While some Scheduled Tribes have adopted a mainstream way of life at one of the spectrums, there are groups even now, characterized by forest-based livelihoods and a subsistence economy. They exhibit strong hesitation in interacting with the outsiders making it a tough task for the government officials or social workers to communicate with them.
- Illiteracy is an important issue that has to be reduced for the smooth implementation of the projects. Lack of education makes it hard for tribals to get to know about the developmental schemes.
- Lack of co-operation and participation were also observed as constraints by the respondents. If the targeted users of these schemes have less interaction with the implementing agency, it would be difficult to get into their issues.

5.5. Recommendations

- Tribal Sub Plan funds should be utilized for creating sustainable and innovative livelihood options for tribals and proper follow up activities needs to be taken up.
- TSP projects have to be more participatory in nature and measures should be taken to improve the involvement of tribal women.
- Tribal education should be given prime importance.

5.6. Conclusion

- Administration of Tribal Sub Plan (TSP) has undergone several institutional changes since 1975.
- TSP was introduced in 1975 to bring the tribal population to the main stream of development.
- Administration of TSP was under the Tribal department, which was handed over to LSGIs in 1992.
- Major constraints in project implementation include: Poor communication facilities, illiteracy of tribal people and access to livelihood options.
- TSP projects have made significant positive impact on livelihood security and empowerment of tribal people in all the three districts.
- Level of empowerment and livelihood security of tribal people as impacted by TSP were not found to have any significant difference across the three districts.

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Appendix

APPENDIX- I

KERALA AGRICULTURAL UNIVERSITY

COLLEGE OF HORTICULTURE

VELLANIKKARA

DEPARTMENT OF AGRICULTURAL EXTENSION

SCHEDULE FOR DATA COLLECTION FROM TRIBAL FARMERS

- Name of the respondent:
- Age:
- Village:
- District:
- Name of the tribe:
- Family Type:

i) Nuclear Family
ii) Joint Family

- Average Income(annual):
- Total land holding (in hectares):

- Area under crop cultivation:

Sl.no	Crops	Area	Production

- **Extent of livelihood security** (Scale developed by Abadi (2010)) with modifications

Name of the programme:
(1) Food Security

Please mention your family's average monthly intake of food items given below:

Sl.No.	Items (gm)	Before the programme			After the programme		
		1	2	3	1	2	3
1	Rice						
2	Vegetables						
3	Pulses						
4	Fruits						
5	Milk						
6	Egg						
7	Fish						
8	Meat						

[1=Quantity, 2=Rs/month, 3=Sources of food (1=own farm, 0=Market)]

(2) Occupational and Financial Security

Sl.No.	Statements	Before the programme		After the programme	
		Increase	Decrease	Increase	Decrease
1	Income from primary occupation	Yes	No	Yes	No
2	Income from production increase	Yes	No	Yes	No
3	Income from subsidiary sources	Yes	No	Yes	No

(3) Habitat Security:

Sl.no	Statement	Before the programme		After the programme	
1	Dwelling				
2	Housing type				
3	Toilet facilities in house				
4	Electric supply to house				
5	Water supply to house				
6	Main road connectivity				

(4) Educational Security:

Sl.no.	Statement	Before the programme	After the programme

1	My children are getting school education	Agree	Disagree	Agree	Disagree
2	My children are getting good quality school education	Agree	Disagree	Agree	Disagree
3	Higher education of children is not affordable to my family	Agree	Disagree	Agree	Disagree
4	We have limited access to information regarding educational opportunities for our children	Agree	Disagree	Agree	Disagree
5	Did your children stop their studies since you could not afford the cost of it?	Agree	Disagree	Agree	Disagree
6	Did you send your children to distant place as you lack education facilities in your place?	Agree	Disagree	Agree	Disagree

(5) Health Security:

Sl.no	Statements	Before the programme		After the programme	
1	We depend on the local health centre for most of our health problems	Agree	Disagree	Agree	Disagree
2	We have to suffer a lot since health care facilities available are not at affordable cost to my family	Agree	Disagree	Agree	Disagree
3	We have to travel to distant town to get better health services	Agree	Disagree	Agree	Disagree
4	We have to depend up on private hospitals for advanced medical aids	Agree	Disagree	Agree	Disagree

(6) Social Security:

Sl.no.	Statements	Before TSP		After TSP	
1	Are you a member of any social organization?	Yes	No	Yes	No
2	Do you participate actively in the social? organization you are involved	Yes	No	Yes	No
3	The social status of your family helps you to improve your livelihood	Yes	No	Yes	No

(7) Environmental Security:

Sl.no.	Statements	Before TSP		After TSP	
1	Availability of clean drinking water	Yes	No	Yes	No
2	Use of organic manure and bio pesticides	Yes	No	Yes	No
3	Adoption of soil and water conservation practices	Yes	No	Yes	No

- **Status of empowerment** (Scale developed by Barua(2012))

On a continuum of +1 to +5 place yourself in terms of changes in empowerment

Psychological Empowerment:

Level of aspiration	5 (Very high)	4 (High)	3 (Moderate)	2 (Low)	1 (Very low)
Self esteem					
Self confidence					
Risk bearing ability					
Self-respect					

Social empowerment:

Aware of socio-economic development programmes	5 (Very high)	4 (High)	3 (Moderate)	2 (Low)	1 (Very low)
Participate in village administration					
Actively involved in addressing social issues and problems					
Capable of decision making					

Economic Empowerment:

Stabilized income	5 (Very high)	4 (High)	3 (Moderate)	2 (Low)	1 (Very low)
Improvement in family income					
Development of savings habit					
Increase in annual savings					
Improvement in standard of living					
Repayment of debt in time					

Political Empowerment:

Participation in political process (like voting)	5 (Very high)	4 (High)	3 (Moderate)	2 (Low)	1 (Very low)
Contesting election					
Member of any political party					

Taking leadership position					

- **Awareness on developmental programmes** (Scale developed by Seema (2002))

Sl.no	Developmental programmes	Awareness	
		Aware	**Not aware**
1	Animal husbandry schemes • Cattle distribution program • Dairy development scheme • Goat distribution program • Poultry distribution program		
2	Crop cultivation • Subsidy for crop • Agricultural credit • Supply of seed materials • Fertilizer supply		
3	Farm mechanization • Distribution of grass cutters • Subsidy for tractor • Distribution of spray pumps		

- **Communication with extension personnel (**Developed by Sripal (1983))

Source	Frequency		
	Very often (3)	Often (2)	Never (1)
Oorukoottam			
Tribal Promoter			
Tribal Extension Officer			
Tribal Development Officer			
NGOs			
Others			

- **Extent of participation in developmental activities** (Scale developed by Seema (2002)) with modification

Sl.no.	Developmental activities	Non-member (0)	Member (1)	Office bearer (2)
1	Panchayath administration			

2	Oorukoottam			
3	Farmer organizations			
4	NGOs			
5	Tribal development institutions			

- Socio-economic impact of selected projects:

  Give your feedback by writing the score on a five-point scale in the appropraiate column before and after the project: 1….2...3...4...5

Project1:

Sl.no.	Nature of impact	Before	After
1	Income level		
2	Education		
3	Production		
4	Social participation		
5	Savings		

Project 2

Sl.no.	Nature of impact	Before	After
1	Income level		
2	Education		
3	Production		
4	Social participation		
5	Savings		

Project 3:

Sl.no.	Nature of impact	Before	After
1	Income level		
2	Education		
3	Production		
4	Social participation		
5	Savings		

APPENDIX- II

KERALA AGRICULTURAL UNIVERSITY

COLLEGE OF HORTICULTURE

VELLANIKKARA

DEPARTMENT OF AGRICULTURAL EXTENSION

SCHEDULE FOR DATA COLLECTION FROM PEOPLE'S REPRESENTATIVES

- Name
- Position in the Grama Panchayath
- Name of the village:
- Total population of the village:
- Total ST population:

➢ Perceived efficacy of implementation of TSP projects:

Sl.no	Item	Very good (1)	Good (2)	Normal (3)	Poor (4)	Very poor (5)
1.	Beneficiary selection					
2.	Distribution of financial assistance					
3.	Maintaining the activities					
4.	Follow up					
5.	Feedback					

➢ Social and institutional constraints in the implementation of TSP projects:

Sl.no.	Constraints	Rank
1	Low beneficiary participation	
2	Absence of co-operation from tribals	

3	Problems of accessibility	
4	Illiteracy of tribals	
5	Delay in receiving funds	
6	Non-utilization and diversion of TSP funds	
7	Non-transparent beneficiary slection	
8	Poor communication facilities	

APPENDIX- III

KERALA AGRICULTURAL UNIVERSITY

COLLEGE OF HORTICULTURE

VELLANIKKARA

DEPARTMENT OF AGRICULTURAL EXTENSION

SCHEDULE FOR DATA COLLECTION FROM OFFICIALS IN TRIBAL DEPARTMENT

- Name:
- Age:
- Designation:
- Work place:

i) Native district
ii) Another district

- Service status:

i) Adhoc
ii) Probationer
iii) Approved probationer
iv) Permanent

- Institutional changes in the administration of TSP

Major changes	Time period	
	1976-1996	1996 - 2017
1. Which department has allocated the TSP funds?		
2. Who has formulated the schemes?		
3. Mode of beneficiary selection		
4. Agency of		

implementation		
5. Mode of implementation of the scheme		
6. Types of developmental interventions under TSP		

- Pattern of outlay and expenditure of TSP funds in the agricultural sector during 2015-2017:

Agricultural programme	2015-16	2016-17
Animal husbandry		
Backyard poultry		
Dairy development		
Fisheries		
Integrated farming system		
Irrigation		
Post-harvest value addition		
Seed production		
Vocational training		
Apiculture		
Sericulture		

- Major physical and financial targets of TSP projects in agriculture:

Projects	2015-16		2016-17	
	Physical targets	Financial targets	Physical targets	Financial targets
1.				
2.				
3.				
4.				
5.				

LIVELIHOOD SUPPORT FOR TRIBAL POPULATION IN KERALA THROUGH PLANNED ASSISTANCE: AN EVALUATION OF THE TRIBAL SUB PLAN (TSP) IN THE AGRICULTURAL SECTOR

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2020

ABSTRACT

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Tribal Sub-Plan (TSP), a strategic policy initiative to secure overall development of the STs, was first introduced in the Fifth Five Year Plan. The focus of TSP is on "securing budgetary allocations for tribal development at least proportionate to their population, in order to bring them at par with other sections of society and to protect them from exploitation." Tribals require specific attention not only with monetary allocation but also for their rapid socio-economic development. This requires integrated approach combining all departments in a united manner and not interventions in isolation.

The Tribal Sub-Plan envisages reducing gaps between the tribals and non-tribals in health, education, communication and other areas of basic amenities of life by providing legal and administrative support. The Sub-Plan also intends to implement livelihood security schemes to enhance the income of tribals by taking into account their aptitude and skill. In Kerala, tribal sub-plan approach was adopted in 1976, to intensify the tribal development programme of the state.

The present study focuses on the extent of livelihood options opened up by TSP projects to tribal farmers and its socio-economic impact in their lives, the institutional changes in the TSP administration, the pattern of outlay and utilization of TSP funds in the agricultural sector and the social and institutional constraints in implementing TSP projects.

The study was conducted in Wayanad, Idukki and Palakkad districts of Kerala. Two panchayaths were selected randomly from each of these districts. From each panchayath, 10 tribals and 10 people's representatives were selected by random sampling, making a total of 120 respondents. The livelihood security of the tribals before and after the implementation of TSP projects was measured using the Livelihood Security Index (LSI). The index scores of the tribals showed that livelihood security of tribals had improved significantly after implementation of TSP projects. However, the three districts were found to have attained almost same level of livelihood security. The status of tribal empowerment which was measured using 'empowerment index', showed that the status of empowerment of tribals had not increased significantly and had remained at low level for majority.

Analysis of the socio-economic impact of TSP shows significant improvement in the levels of their income, production, savings, education and social participation. Distribution of funds for TSP programs in agricultural sector shows that more funds were allotted to crop cultivation and animal husbandry programmes.

Poor communication facilities and illiteracy of tribals were the major constraints experienced by people's representatives while implementing the TSP programmes. It was also observed that participation of the tribals in developmental activities was very low. High degree of concordance was found to exist among the people's representatives with regard to the importance ascribed to constraints in implementing TSP programmes .

The study highlights that participation of tribals has to be enhanced by government officials while planning tribal development programmes and more efforts have to be taken up to increase the tribal literacy levels. The non-cooperative attitude of tribals towards developmental activities has to be deliberately changed. Emphasis on agriculture should be shifted to varied avenues of income generation to improve their livelihood security.