EVALUATION SERIES NO: 88

GOVERNMENT OF KERALA

SOCIO-ECONOMIC IMPACT OF AHADS

IN ATTAPPADY:

A QUICK EVALUATION STUDY

EVALUATION DIVISION

KERALA STATE PLANNING BOARD

THIRUVANANTHAPURAM

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FOREWORD

The Attappady Waste Land Comprehensive Environmental conservation Project (AWCECOP) aims at eco-restoration and improvement of livelihood using participatory resource management. The project was initiated in 1996 by AHADS, an autonomous institution under the Local Self Government Department of Kerala. The present Evaluation Study is focused on the socio – economic impact of the development activities of AHADS in Attappady, in particular the improvements in livelihood security of tribal comities.

Livelihood protection measures are included under AHADS package. These measures entail timely food and income transfers which can change long term vulnerability resulting from the forced selling of productive assets to meet immediate food and other needs. AHADS protection type intervention included infrastructure improvements, soil and water conservations measures etc and these are implemented by the community through the people's Institution.

Sustainable livelihood, enriched environment, improved quality of life and human values, which are all included under the Project. AHADS has identified hamlet as a unit of development in place of family. Improvements in quality of life through various development activities including health, literacy and moral development are all significant steps in the right direction towards sustainable livelihood. Eco-restoration package needs special mention in this regard.

Livelihood provisioning under the AHADS' package was much weaker than the other segments. Targeted food and health relief is critical and should be combined with production intervention. Community focused interventions are necessary for chronically vulnerable populations (eg. Mother and child health programmes) to allow for the provisioning activities to be taken over by the community on a sustainable manner.

For the preparation of the report, along with the Primary data, Secondary data collected from the AHADS Administrative Reports, Annual Reports, Status Reports and Plan Proposals are also used to know whether the development strategies and plans are in conformity with the Project objectives.

The Report was prepared by Dr. Reji D. Nair, Research Officer under the over all supervision of Smt. K.Saraswathy, Chief (i/c) Evaluation Division, State Planning Board.

Teekaram Meena, I.A.S
Member Secretary
State Planning Board

Thiruvananthapuram
October 12, 2010

PREFACE

The Attappaddy Wasteland Comprehensive Environmental Conservation Project (AWCECOP) was initiated in 1996 with the objective of halting the ecological and social degradation and improving the livelihood base of the affected communities, with special focus on tribal communities. The Project is implemented by Attappady Hills Area Development Society (AHADS), an autonomous institution under the Local Self Government Department of Government of Kerala.

The Evaluation Division of the State Planning Board has taken up a Quick Study on the socio-economic impact of the AHADS in Attappady. The major objective of the present evaluation study is to assess the socio-economic impact of the development activities of AHADS in Attappady, in particular the improvements in livelihood security of tribal communities. Even though the Project has greatly helped in improving the landscape of Attappady and has assisted local people, especially tribal communities to overcome poverty to a considerable extent, sustainability of the initiatives is a major issue of concern. Livelihood provisioning under the AHADS' package remains weak. Targeted food and health relief is critical and should be combined with production intervention. Community focused interventions are necessary for chronically vulnerable populations (eg. Mother and child health programmes).

The study was carried out by Dr. Reji D. Nair (Evaluation Division) under the over all supervision of Smt. K.Saraswathy, Chief (i/c) Evaluation Division, State Planning Board.

Prof. Prabhat Patnaik
Vice-Chairman
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Thiruvananthapuram
October 12, 2010

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ABBREVIATIONS AND ACRONYMS

AHADS	Attappady Hills Area Development Society
AWCECOP	Attappaddy Wasteland Comprehensive Environmental Conservation Project
BAIF	Bharatiya Agro-Industries Foundation
CBOs	Community Based Organizations
CWRDM	Centre for Water Resources Development and Management
DEA	Department of Economic Affairs
DFID	Department for International Development
DTM	Digital Terrain Model
DUs	Development Units
ECs	Executive Committees
GoI	Government of India
GONGO	Government Owned NGO
GPs	Grama Panchayats
HLS	Household Livelihood Security
HRD	Human Resources Development
IDS	Institute of Development Studies
IFAD	International Fund for Agricultural Development
IGAGs	Income Generation Activity Groups
IGAs	Income Generating Activities
IRMA	Institute of Rural Management
IRS	Indian Remote Sensing
ISA	Institute for Societal Advancement
JBIC	Japan Bank for International Cooperation
JFMCs	Joint Forest Management Committees

JICA	Japan International Cooperation Agency
Msl	Mean sea level
MIS	Minor irrigation schemes
NGOs	Non Governmental Organizations
NREGS	National Rural Employment Guarantee Scheme
OECF	Overseas Economic Cooperation Fund
OVSs	Ooru Vikasana Samithis
PHC	Primary Health Center
PIA	Project Implementation Agency
PIs	People's Institutions
PRIs	Panchayat Raj Institutions
PWD	Public Works Department
SC	Scheduled Castes
SHGs	Self Help Groups
SL	Sustainable Livelihood
SSIs	Small Scale Industries
ST	Scheduled Tribes
THDP	Total Hamlet Development Programme
TKS	Thaikula Sangams/ Mothers Groups
UAs	User Associations
UNDP	United Nations Development Programme
WRD	Water Resources Development

Executive Summary

The Attappady Wasteland Comprehensive Environmental Conservation Project (AWCECOP) aims at eco-restoration and improvement of livelihood using participatory resources management. The Project is implemented by AHADS, an autonomous institution under the Local Self Government Department of Government of Kerala. The approach of implementation is based on the principle of Community Governance through grass root level People's Institutions (PIs), ensuring participation and transparency. Afforestation, biomass development, conservation of water resources and promotion of sustainable Income Generating Activities (IGA) are attempted through community based organizations, ensuring micro-watershed based governance of resources.

As directed by the Hon'ble Vice Chairman, State Planning Board, the Evaluation Division has taken up a Quick Study on the socio-economic impact of the AHADS in Attappady, Palakkad district. The major objective of the present evaluation study is to asses the socio-economic impact of the development activities of AHADS in Attappady, in particular the improvements in livelihood security of tribal communities. The study is basically focused on the assessment of socio-economic progress made in Attappady and thereby analyzes the improvements made in the livelihood of the local communities specifically the tribal communities. The eco-restoration programmes and the commensurate environmental benefits at the local level are not covered under the present study, as it is a quick study.

The study is focused on the livelihood improvement of various communities both horizontally and vertically covering all the three Grama Panchayats (GPs) viz, Pudur, Sholayur and Agali. Along with the Primary data, Secondary data collected from the AHADS Administrative Reports, Annual Reports, Status Reports and Plan Proposals are also used in the study to know whether the development strategies and plans are in conformity with the Project objectives. The study is organized in seven chapters.

Utilizing participatory planning tools along with various eco-restoration and livelihood security activities micro-watersheds were organized as the Project implementation unit. Procedures and protocols were prepared for assisting the PIs to function as local governments. The funds to implement various activities, such as raising

forestry plantations, conserving biomass areas to assist natural regeneration, and works related to soil and water conservation, minor irrigation and agriculture development, total tribal hamlet development etc, were identified in the donor agency approved implementation plan, and released to AHADS by the Government of Kerala. In turn, AHADS placed funds in the accounts of the PIs and provide technical support to them for implementing various agreed activities and claim reimbursement from the JBIC (JICA).

The Total Hamlet Development Programme (THDP) aims to address total hamlet development plan for tribal areas, which envisages comprehensive development by incorporating the social, cultural and individual needs through participatory approaches from planning, execution, implementation and usage ensuring transparent and tribal empowerment practices.

AHADS has promoted a range of organizations of the local people to implement various activities of the Project to achieve the objectives. These organizations, as mentioned earlier, include Users' Associations (UAs), Ooru Vikasana Samitis (OVSs), Joint Forest Management Committees (JFMCs), Thaikula Sangams (TKSs) and Income Generating Activity Groups (IGAGs). Even though the initiative and enthusiasm including the level of participation of various sections of the society in the PIs was quite high in the beginning, the activity status has slowly declined over the years.

The major findings of the study as evinced through the sample survey are as follows.

Demography

In Attappady, sex ratio is comparatively lower than that of the State average. As of 2001 Census the ratio was 981 in Attappady, where as it was 1058 for the State. Among the tribal communities the ratio is as low as 818 for Kurumba community, however, the Muduga's have a better ratio of 1083, even better than the State average. The working age group (from 18-55years) population contributed around 55% of the total population with marginal variation between tribals vis-à-vis non-tribals. To a greater extent family size will declines as the demographic transition takes place in juxtaposition to socio-economic development. In Attappady, around three quarters of the families have size of 3 to 5 members; among the tribal communities especially Kurumba 27% have family size above 5 members. Among the elderly population in Attappady, 81.5% are

married. Widowed account for 13% among the tribal communities as against only 4% among non-tribals.

Literacy and Education

In Attappady the literacy rate is only 54% (2001), indicating the backwardness of the area, which is far behind the district average of 84%. As per the sample survey, the literacy rate in Attappady is 65.5%, which shows an improvement over 2001. However, among the tribal communities literacy rate is only 49%. Educational status of households indicates that 19.5% did not have any formal education; the corresponding figure for the tribal communities was a staggering 28%. Another 57% of the tribal communities could not complete their 10^{th} Grade in schools. Graduates, technically educated and professionals constitute a meager of 2% among the tribal community. On an average 1.15 children are going to school per family in Attappady; the corresponding figures of the tribal households come to 1.3. The drop-out rate is 4.75 in Attappady, as against the state average of 0.83%. Drop-out rate is as high as 18% among Kurumba community and for Muduga it is only 4.5%. The fall in school dropouts when compared to the previous years is interpreted to be attributed to the better socio-economic conditions emerging in the hamlets as a result of project implementation. One of the major reasons for the school drop-out in Attappady is financial difficulty of the parents as evinced in the Survey. In some cases it will lead to Child labour. However, it was reported that Child labour has drastically reduced during the project implementation period, which can be related to the decreasing school dropouts, as more and more children are being sent to the schools.

Labour, Employment and Wage

The sample survey shows that 63% of the working aged people are laborers and among the tribes it is as high as 81%, most of them are employed in the informal sector without any social security benefits. Community-wise employment status reveals that these figures are too high for the Kurumba community (86%). The organized sector employment accounted for 14% in Attappady, where as the corresponding figures for the tribal community was only 9.5%. The AHADS' project has so far generated more than 3.45 million man days of employment. In the sample survey it was reported that the Project has generated on an average 5.2 man days of employment per week for men and 4.7 man days for women each in the beneficiary hamlets. The Project has helped to a

great extent in generating employment among the tribal communities. On an average 18% of the tribal communities got more than 200 man days of employment within the last one year. When AHADS started project implementation, the daily wage rate prevailing in Atappady, especially in Eastern Attappady, was as low as 30 to 50 rupees. AHADS has established and ensured a just wage rate of 80 to120 rupees through the PIs; efforts are being made to enhance the daily wage rate to Rs. 125 for both men and women in tune with the wages provided under Employment Guarantee Programmes of the Panchayats. However, in practice at the grass root level, there was gender gap in distribution of daily wages; female wages was only 81% of the male wages. This gap was much higher among the tribal communities and is as high as 71% among the Irula community. But, there is really a great increase in the wages of laborers ranging from 40-75% in the hamlets after the initiation of the Project, which has directly translated into the livelihood outcomes through access to food and other basic needs.

Income and Expenditure Pattern

Around 35% of the tribal communities have monthly income lesser than Rs.1500, which translates into the poverty ratio at the hamlet level. The corresponding figure for the non-tribals was only 20% in Attappady. On an average tribal household spent Rs. 1141 for food items per month and the corresponding figure for the non-tribals was Rs. 2489. Tribal households' expenditure for food was 44% of the total expenditure, whereas for the non-tribals it was only 32%. It could be seen that tribal households' expenditure for food is only 46% of the non-tribal households; the corresponding figure for health is only 22% and children's education is only 20%. These figures speak the inequality prevailing in Attappady, which are all reflected in the livelihood security and thereby the socio-economic progress of the tribal communities.

Housing, Drinking Water and Energy

In Attappady, 84% of the houses are roofed by tiles/ asbestos. Thatched houses account only 3% and the remaining are concrete. The fall in the number of thatched houses is an indicator of livelihood promotion of AHADS. The AHADS' initiatives in Total Hamlet Development are evinced in the status of houses in Attappady tribal hamlets. Regarding roof type, walls and flooring tribal households have better facilities than the non-tribes in the area. It exemplifies the role of AHADS in the livelihood

promotion of people in Attappady. For drinking water purpose people are mainly depending on wells and ponds in Attappady; in the sample survey it was found that 49% of the tribal households are depending upon rivers, streams and ponds for drinking water purpose. The Sample Survey reported that 77% of the households are depending on firewood for cooking fuel. The corresponding figure for tribal households was 92%. Houses with latrine facilities ranged between 85-90% between tribal and non-tribal households.

Ownership of Assets

As regards the land holding pattern in Attappady, 49% of the holdings fall below 0.5 hectares, whereas it constitutes only 13% of the total land area. It means that majority of the land owners are small/ marginal land owners. The inequality in distribution of land is further illustrated by land holdings above 2 hectares, which constitute only 9% of the total land holdings, but cover one-third of the total land area in Attappady. In the sample survey it was found that 56% of the tribal households and 90% of the non-tribal households have landholdings between 100-500 cents of land. In the sample survey it was observed that 32.5 % of households owned cows/bullocks, 20% goats/sheep and 44% owned chickens. The corresponding figure among the tribal communities was 25% for cow/bullocks, 30% goat/sheep, and 48% for poultry. It was reported that 18.5% of the households have their own bank deposits and the figures for the tribes was only 17%. The lowest rate of bank deposits ownership was reported among the Kurumba community. The living standard of the community and thereby the livelihood security in the modern world does not rest with food security but it extents to the ownership over wide range of assets, both tangible and intangible including household appliances. It was found that 44% of the Attappady households owned Television sets, 11% refrigerators and 62.5 % owned telephones/ mobile phones. However, the corresponding figure among the tribal communities was 22% for television sets, 2% for refrigerators and 35% owned telephones/ mobile phones.

Progress of THDP

In the selected hamlets for sample survey, only 23% of the houses have completed construction by December 2009. In 30% of the hamlets landscaping was also part of the THDP, but only in 5% of hamlets they had drinking water supply schemes attached to it.

Households' view on the houses constructed under THDP was rated well in 90% of the cases. The inadequate availability of raw materials in Attappady for civil constructions and the higher costs involved in transportation of materials to remote corners slows down the pace of the progress of the project. Transportation problems hindered construction work in 45% of the cases, correspondingly material shortage affected in 24% of the cases; in 25% of cases households reported cost escalation. The THDP works are implemented through Ooru Vikasana Samithis (OVS) with the participation of local people. Households have good faith in their OVSs, around 58% of the households commented about their OVS's good performance.

People got various livelihood assistances under the eco-restoration project, which include assistance for agro-forestry and plantations, field crops, community resource centers, hamlet paths, environment awareness through literacy campaigns, and trainings. Around 64% of the tribal households got assistance for field crops, 67% got assistance under agro-forestry and 79% participated in environmental literacy campaigns. The household survey also collected suggestions of people for the improvement of AHADS activities; around 32% of the people are of the opinion that AHADS activities are to be continued. Tribal households wanted for more road connectivity to hamlets (44%) and asked for assistance for side wall construction (14%). Non-tribal households are in need of assistance for irrigation support (39%) and marketing support (17%) from AHADS initiatives.

Sustainability of People's Institutions

The active members in various PIs averaged 84%. The participation was as low as 63% among TKS members and was high among OVS members (96%). The sample survey revealed that 53% of the EC members belong to the very active age group of 18-35 years with a maximum of 58-59% for JFMCs and OVSs. The educational background of the EC members shows that a staggering 25% are without any formal education; even then, their participation and the number of EC meetings convened are very high. The sample survey discloses that 69% of the EC members have monthly income status of Rs.1500 and above.

In the sample survey it was found that a good number of IGAG schemes are coming under vegetable farming and plant nursery (22% each) followed by banana,

tapioca and paddy cultivation (14% each); The performance of major schemes implemented by OVS (other than house construction under THDP) shows that side wall protection and landscaping (19%), check dams and village roads (14% each) dominate the OVS activities. Major schemes implemented by the JFMCs include fire-lines, trenches, soil mulching, weeding and agro-forestry. The average estimated cost of each scheme was Rs. 7,96,008; however the actual expenditure was only 61% of the outlay. Check dams, rain water harvesting systems and tanks contributed 24% of the schemes implemented by UAs followed by farm nurseries and other agronomic activities (16% each). We can observe a negative correlation between the size of the beneficiaries and the average expenditure as a percentage of the estimates. Prohibition of liquor consumption in the hamlets (48%), actions against domestic violence (16%), control of drugs addiction including Ganja and literacy campaigns (12% each) constitute the major activities of the TKSs. Among the five PIs created by AHADS, the participation and cooperation of community to the PIs was reported to be high for IGAGs (63%). The level of cooperation of AHADS towards the PIs varies from one institution to another. For instance, public awareness classes (72%) was a major source of assistance from AHADS to TKSs, where as for IGAGs it was trainings (31%), for OVSs and JFMCs technical advices (corresponding weightages include 36% and 43% respectively), and for UAs' financial/ technical support.

The Study reveals that livelihood provisioning under the AHADS' package was much weaker than the other segments. Targeted food and health relief is critical and should be combined with production intervention. Community focused interventions are necessary for chronically vulnerable populations (eg. Mother and child health programmes) to allow for the provisioning activities to be taken over by the community on a sustainable manner. The Study concluded that the infrastructure created by AHADS needs to be maintained either by converting it into a training institution or as proposed by AHADS itself, it can be molded as the custodian of the eco-restoration project for Wayanad, if implemented. The Study also urged the need for linking the PIs created by AHADS and the Local Governments' service delivery systems.

CHAPTER- 1
INTRODUCTION

Attappaddy Wasteland Comprehensive Environmental Conservation Project (AWCECOP) was taken up in 1996 with the objective of halting the ecological and social degradation and improving the livelihood base of the affected communities, with special focus on tribal communities. The AWCECOP aims at eco-restoration and sustainable livelihood using participatory resource management methodology. The Project is implemented by Attappady Hills Area Development Society (AHADS), an autonomous institution under the Local Self Government Department of Government of Kerala.

A loan agreement was signed between the Japan Bank for International Cooperation (JBIC), and Government of India (GoI) for this purpose. The loan agreement got effective from 26th March 1996, with the loan disbursement closure on 26th March 2005. Through subsequent amendments to the loan agreement the loan disbursement closure date has been extended up to 26th March 2010. Of the total project outlay of Rs 219.31 Crore (6338 Million Yen), Rs 176.90 Crore (5112 Million Yen) is provided by the JBIC as loan, whereas the Government of Kerala (GoK) share is Rs 42.41 Crore towards administrative cost[1].

Attappady: The Land of Tribes

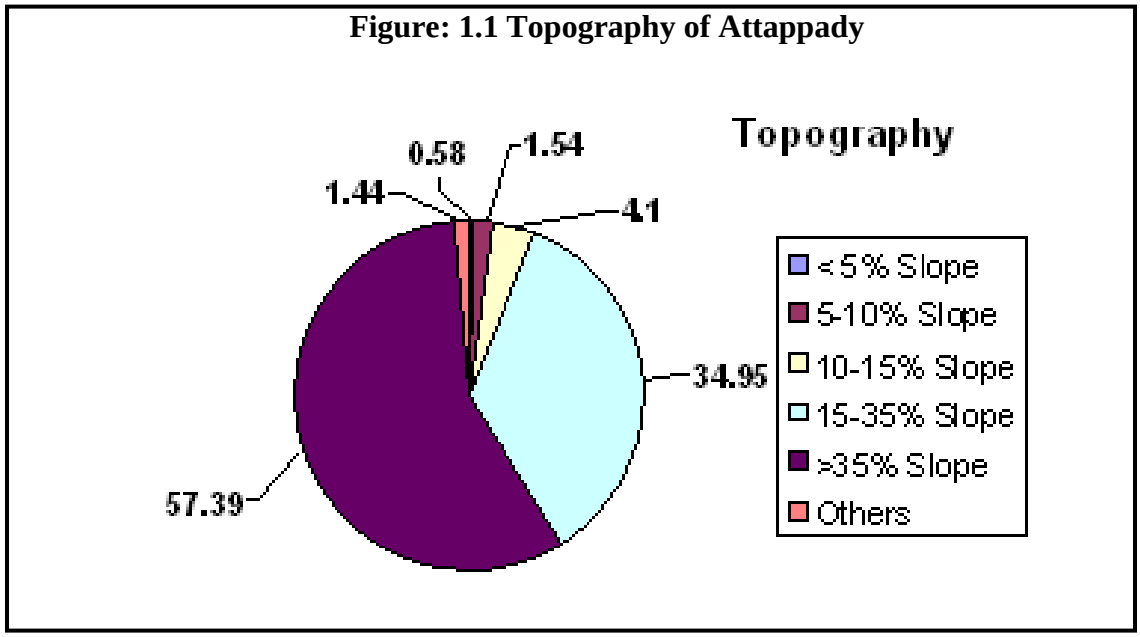
Attappady is an area classified as the first Integrated Tribal Development Block of Kerala and forms part of Mannarkkad Taluk of Palakkad District. The undulating hill tract of Attappady is drained by the river Bhavani and its main tributary Siruvani. It has a total area of 745 sq. km. spread over three Panchayats, namely Agali, Pudur and Sholayur. The Attapady block is located between 10^{o}55’ 10’’ and 11^{o} 14’ 19’’ North Latitude and between 76^{o} 27’11’’ and 76^{o} 48’ 8’’ east Longitude, stretching from Mukkaly to Anakatty (West-East) and Thazhemully to Muthikkulam (North-South), covering an area of 745 square kilometer (sq.km) in Mannarkad Taluk of Palakkad district, Kerala state, South India.

Attappady region is a showcase for the most vibrant and yet conflicting social and cultural ethos. Once only tribals inhabited, but now Attappady has become the recipient

of waves of migration from the plains of the East and the West, which eventually made the tribes a minority, constituting less than half of the total population. The tribal population belongs to the Irula, Muduga and Kurumba communities, whereas the non-tribes consist of settlers from other parts of Kerala, Tamilnadu and Karnataka.

Attappady is part of the Nilgiri Biosphere Reserve. The Nilgiris, as part of the southern Western Ghats rise from the Palghat gap and exhibit a complex topography. The mountains in this range are some of the oldest geological formations in South-Western India. The terrain of Attapady is quite undulating, holding a large number of hillocks of varying elevation ranging from 450 to 2300 meters above the mean sea level (msl). The tall hills of the Nilgiris (2300 meters (mts) above msl) border the North and East, and the Muthikkulam hills (2000 mts above msl) form the South-west boundary of the Attapady Block. Attappady exhibits steep physiography with elevation range from 450 mts to 2300 mts. A large part of the area falls within the category of land above 35 percent slope (43835 hectares, or 438.35 sq km). The balance area viz., 30675 hectares, or 306.75 sq km falls under undulating, erosion prone landscape. About 40 percent of the Eastern slopes fall within the rain shadow zone with rainfall of less than 1000 millimeter (mm) per annum. Erratic rainfall with poor retention of soil moisture qualify most of these lands as dry wastelands.

Figure: 1.1 Topography of Attappady



The western slopes of Attappady are under denser vegetation. Indiscriminate denudation and practice of shifting cultivation once prevalent in this tract had created patches of land sometimes under cultivation, especially in the embankment of rivers and rivulets. These patches are under paddy, coconut, areacanut, tapioca, banana, ginger, turmeric, vegetables, etc. Plantation crops like coffee, cardamom, clove etc. are cultivated on the Southern and Western slopes. The Eastern slopes are predominantly under dry land agricultural crops, which include chamai, sorghum, ragi, groundnut, sunflower etc. Both in the Eastern and Western slopes, wherever irrigation facilities are available, sugarcane, cotton, banana etc. are cultivated. The Western slopes carry a wide variety of forest species commonly found in other parts of Western Ghats. But the Eastern slopes carry scanty vegetation, predominantly deciduous and thorny in nature.

Figure: 1.2 Location of Attappady

The Attappady region is drained by two major rivers- Bhavani and Kunthi. Shiruvani, Varagar and Kodugarapallam are the main tributaries of Bhavani river which flows to Tamil Nadu then converging with Kaveri river. Kunthi is one of the major tributaries of Bharathapuzha originating from Angindamudy of Silentvally National Park.

Figure: 1.3 Watersheds of Attappady

An organized effort for the development of this tract was started after the coming up of the new State in 1957 and during 1961 the National Extension Service was introduced under the Five-year Plans[2]. However, nothing significant happened for long. This can be attributed both to the inherent limitations of National Extension Services and lesser accessibility for the functionaries to interior areas. Agriculture and Animal Husbandry development succeeded to limited extents, that too only to the accessible areas, or in the hamlets lying in close proximity to the roads and embankments, rivers and their tributaries. Subsequently, Applied Nutrition Programme with external assistance moved to the interior habitations. This is because of the fact that the scheme provided assistance by way of giving free food and related commodities to the tribes. It is to be noted that in the earlier days, the remoteness of Attappady and linguistic uniqueness of the tribes slowed down the advancement of developmental inputs. Furthermore, general indifference of the functionaries towards tribal development, top-down planning process, lack of transparency in implementation, ineffective monitoring and evaluation etc. have seriously undermined the past developmental efforts.

Attappady had witnessed massive removal of the forest wealth in the past. This continued even after the state re-organization. With the introduction of the Block Development Office and other developmental departments of the Government, a large number of roads and subways were constructed. However, the quality of construction by

and large left much to be desired, as presently, almost all roads are in a dilapidated condition requiring urgent repairs. With the coming of the forest reservation and Forest Act in the late Nineteenth Century, the forest of Attappady entered the scientific management of British forestry. Post-independence, the Kerala Forest Act of 1961 helped to a certain extent in controlling forest felling and degradation. However, it restricted the movement of the tribal people in the forest area and also affected their livelihood.

From the early Twentieth Century, large-scale arrival of plainspeople, both from Travancore and Tamilnadu, also disturbed the tribal life in Attappady. The settlers from the plains began occupying rich, fertile valleys and converted them into agriculture lands. In the process, the tribes were pushed further up in the mountains. Most of the tribal people were shifting cultivators, and hence near their settlements large extents of forestlands became degraded. With little understanding of settled agriculture and restriction to use forest resources, the tribal community began experiencing a new phase of social unrest, which was dominated by unemployment and poverty. Gradually the tribes began working for the settlers, Forest Department and other government agencies as manual labours. The situation of all the settlers was also not much better. Attappady area was considered as malaria stricken tract and therefore, the affluent sections of society from other areas did not migrate to Attappady. It was only the economically backward and a faction of destitute who migrated to the area. Lesser financial resources and the unpredictability of reasonable returns for their efforts from the fragile eco-system always remained a serious challenge. In the absence of proper system for marketing of products, the farmers were in serious financial crisis. A few others turned to be the intermediaries and middlemen.

Background of the Project

Various climatic and anthropogenic factors have worked cumulatively to inflict severe damages to the ecology and the livelihood support systems of the people in Attappady. Apart from physical and climatic factors peculiar to the region, massive encroachments over forest and cultivated lands, introduction of unsustainable cropping systems, and grazing etc. had all contributed in inflicting heavy damage on the ecosystems. The severity of the damage had become all too evident in all components of the ecosystem – water, soil, plant and animal species in the forest and other lands. Due to

deforestation in the catchments and also due to the presence of several water diversion schemes, water had become unavailable when and where it was needed, creating greater dependence on ground water sources. Most of the perennial springs that once dotted the hilltops of Attappady had disappeared. Water quality had worsened considerably and the polluted water used for drinking and cooking had become a source of diseases and ill health of the people of Attappady, especially the tribal people.

The run-off rate of the rainwater increased due to loss of vegetation and hardening of surface soil. The beds of the streams and rivers got filled up with sediments. Weathering had caused drastic changes in the terrain of the area. The changes in the structural and chemical properties of soil had altered the overall land use pattern. The extent of soil erosion in Attappady is one of the highest in the State. Extensive felling of trees and the tillage along the slopes, using bullock-driven ploughs- which were never a part of the traditional tribal agricultural practice have led to soil runoff and depletion of the groundwater. As the fertility of soil was declining, even more unsustainable practices such as using the thin topsoil for making bricks came into vogue in eastern Attappady. At the time of planning for the Project, a considerable part of the land surface in the area had become impervious. Agricultural practices were no longer in tune with water availability or local requirements of food security.

A significant cause as well as indication of the ecological imbalance of Attappady is the widespread destruction of the natural plant species of the area. The impacts due to the degradation of the ecosystem are evident in all the three broad categories of land in Attappady, viz., private agricultural holdings, land belonging to the tribal communities and land under the control of the government, including the river banks, road sides etc. The net result of this widespread ecological degradation was that nearly 507 sq. km out of the 745 sq. km.of total land area of Attappady was classified as wastelands[3]. The ecological degradation, as well as weakening of life supporting systems followed the large encroachments over forest and resultant deforestation. Unscientific cultivation practiced over the cultivable land along the steep slopes and valleys further degraded the ecosystems and badly affected the lives of the people, especially the tribals of the area.

In 1993, the Rural Development Department, Government of Kerala, entrusted the Centre for Water Resources Development and Management (CWRDM) the task of

drawing up a comprehensive project for Integrated and Sustainable Econ-Development of Attappady Wastelands. The Project was submitted to the Department of Economic Affairs (DEA), Government of India with a request for loan assistance from the Overseas Economic Cooperation Fund (OECF), later renamed as JBIC. In January 1995, DEA short listed the Project for posing it to the OECF and during February 1995, a fact-finding mission from the OECF visited the Project area and held discussions with the Central and State Government agencies. Subsequently in October 1995, after finalizing the structure of the Project, the implementation agency and the financial terms and conditions, the State Government announced the formation of the autonomous society, 'Attappady Hills Area Development Society' (AHADS) with its headquarters at Agali for the implementation of the Project. The initial title of the Project, 'Integrated and Sustainable Eco-Development of Attappady wastelands' was changed as 'Attappady Wasteland Comprehensive Environmental Conservation Project'.

On October 31, 1995, AHADS was registered under the Charitable Societies Registration Act, 1860. A loan Agreement ID-P/111 was signed on 25-1-1996 between the GOI and the OECF (later renamed as JBIC)[4]. The Project was formally inaugurated on February 11, 1996. As per the requirement of the Project, M/s Nippon Koei Co Ltd. Japan was selected as the Project Consultants on 15th July 1999. The Consultant prepared and submitted an implementation schedule during February 2000, based on which, the implementation of field activities was formally inaugurated on 22nd April 2000.

Later it was realized that without addressing the prevailing socio-economic issues, primarily related to poverty, illiteracy and health, especially among the tribal communities of Attappady, the stated objectives of participatory eco-restoration would remain a distant reality. It was felt that the work components already agreed in the original Project might not adequately address the objective of livelihood security and the special emphasis given to the tribal population. Therefore, the Project was restructured in 2002, by adding the Total Hamlet Development Programme (THDP) and the health and education components in the Project. The restructured Project was inaugurated on 17th November 2002.

In short, the major objectives of the AHADS include the following.

- Ecological restoration of degraded wastelands in Attappady;

- Development of replicable models of participative eco-restoration;
- Prevention of further degradation;
- Promotion of sustainable method of livelihood for the local people (with special emphasis on tribal population) in harmony with resource base; and
- Scio-economic development of weaker sections particularly tribes (The components for such developments were incorporated with original project on 2002.)

Deviating from the normal process of development work based on artificial boundaries like village/ward/panchayat, this project has adopted a purely scientific approach based on watersheds. Attappady block area has been divided into 15 watersheds or Development Units (Figure: 1.3). These 15 watersheds are further divided into 146 micro watersheds[5]. The project proposals envisaged in the reports are implemented through active people's participation.

Unlike the traditional system of planning undertaken at the upper echelons of the organization, this project envisages a system of hierarchy of committees for planning. In this approach, the broad outline of Project viz. Perspective plan was formulated by the Project Implementation Agency (PIA) viz. AHADS. It fixed the realistic targets in all the sectors of development. The AHADS organized its subsidiaries viz. User Associations [UA] (Registered Societies) to enable realistic participation of the inhabitants at the micro watershed level. Apart from this Ooru Vikasana Samithies (OVS) are formed at each tribal hamlet to address the common issues of these marginalized communities and Joint Forest Management Committees (JFMC) to manage the forest resources taking initiation in regenerating the degraded forestlands. These grass root level interest groups emerged out with creative proposals to satisfy the demands, desires and aspirations of the locality. AHADS employed volunteers to get associated with the beneficiaries for enlightening the possibilities of organizing target oriented work priorities aimed at the Project goals. This helped these bodies to evolve need-based micro plans within the broad principles of perspective plan.

So far 93 User Associations (UA) have been formed in 93 Micro Watersheds with human population out of the total 146 MWS's, which administered the project implementation[6]. A total of 160 Ooru Vikasana Samithies (OVS) have been formed and

activated at the Tribal Haamlets level to take up the activities concerning the hamlet common lands. Development Unit level co-ordination committees set up by Government consisting of elected representatives and Government Officials to act as an advisory body and to avoid duplication of works by various departments of the Government are functioning in all the 15 Development Units.

The AHADS has the following components at its kitty.

- Water and Land Conservation on Private Land;
- Water & Land Conservation in Degraded Forest Land;
- Water Resource Developments;
- Income generating Activities;
- Hamlet and Ooru Bhumi Development;
- Infrastructure;
- Software activities/Materials for Awareness;
- Hamlet Based Developments;
- Human Resource Development;
- Additional Environmental components;
- Improving Healthcare Facility;
- Monitoring and Evaluation;
- Survey, Planning and Designing; and
- Institutional Strengthening.

Background of the Present Study

As directed by the Hon'ble Vice Chairman, State Planning Board, the Evaluation Division has taken up a Quick Study on the socio-economic impact of the AHADS in Attappady, Palakkad district.

Objectives of the Study

The major objective of the present evaluation study is to asses the socio-economic impact of the development activities of AHADS in Attappady, in particular the improvements in livelihood security of tribal communities.

The specific objectives of the Study include:

- To evaluate the economic gains to the local communities, especially the tribal communities from the development activities of the AHADS;
- To asses the social progress made in Attappady through the development activities of AHADS;
- To investigate the sustainability of tangible assets created for the benefit of the local communities, specifically for the tribal communities, under the AHADS;
- To analyze the improvements in the livelihood security of the local communities, specifically of the tribal communities;
- To investigate the structural and local level bottlenecks threatening the rural development initiatives in Attappady;
- To analyze the feasibility and viability of development strategies adopted by AHADS in Attappady;
- To investigate the cost incurred in AHADS' socio-economic projects and the extent of cost escalation due to delay in implementation, if any;
- To evaluate the sustainability of the grass root level organizations created under the AHADS; and
- To asses the extent of people's participation at the local level in the development activities of AHADS;

Methodology

The Evaluation study is basically focused on the assessment of socio-economic progress made in Attappady and thereby analyzes the improvements made in the livelihood of the local communities specifically the tribal communities. The eco-restoration programmes and the commensurate environmental benefits at the local level are not covered under the present study, as it is a quick study.

As mentioned earlier, the Study focuses on the socio-economic improvements of the local communities and the sustainability of the people's institutions created under the AHADS. Attappady block is a tribal belt inhabited basically by three communities vz. Muduga, Irula and Kurumba, other than non-tribal communities; the block covers three Grama Pachayats viz, Pudur, Sholayur and Agali. The present socio-economic study is focused on the livelihood improvement of various communities both horizontally and vertically covering all the three Grama Panchayats (GPs). Out of the 2581 tribal families inhabited in the block, the study covered 10 per cent of families (250). Out of total tribal population in the Block, 53 per cent belong to Agali GP, 27 per cent in Sholayur GP and the remaining 20 per cent in Pudur GP. Approximately the same ratios of samples are selected for the Study from each of the GPs. Structured questionnaires are used for collecting the necessary information for the Study.

The development activities of the AHADS are implemented through hundreds of People's Institutions (PIs) created to ensure people's participation, which include User Associations (93 UAs), Ooru Vikasana Samithis/ Hamlet Development Committee (166 OVS), Joint Forest Management Committees (54 JFMCs), Thaikula Sangams/ Mothers Groups (111 TKS), and Income Generation Activity Groups (219 IGAGs). For the present Study separate Questionnaires are used to collect data from these PIs to assess the viability and sustenance. The Survey covered ten percent of each PIs (9UAs, 17 OVSs, 5 JFMCs, 11 TKSs and 22 IGAGs).

The data collection took one month time (December, 2009). Two investigators selected (from outside) and trained stayed in Attappady for one month and collected the data by using structured questionnaires. Officers of Evaluation Division stayed with the investigators and monitored and helped in data collection. The data collection covered 250 tribal households residing in various hamlets other than 100 non-tribal households; and 64 PIs created for the implementation of the development activities.

Along with the Primary data, Secondary data collected from the AHADS Administrative Reports, Annual Reports, Status Reports and Plan Proposals are also used in the present study to know whether the development strategies and plans are in conformity with the Project objectives.

Collected data was analyzed to assess the socio-economic impact of AHADS at Attappady, Palakkad. Household level data and PIs level data are compiled and analyzed separately to assess the viability and sustainability of the programmes, activities, and development strategies of AHADS at the local level.

Organization of the Study

The study is organized in seven chapters. The First chapter is and introduction to the study which disclose the objective and methodology of the Study. It also gives a brief outline on the genesis of AHADS. Second chapter reviews selected literature on AHADS to get a background of the AHADS' initiatives and strategies at Attappady. An over all view on the development activities of AHADS is briefed in Chapter three. Chapter Four is an analysis of livelihood model implemented by AHADS in Attappady as part of its eco-restoration project. Chapter Five is an empirical analysis of the socio-economic improvement of communities in Attappady, specifically tribal communities, due to the development activities of AHADS. Primary data collected through sample survey assisted the analysis. Sustainable livelihood models need transparent People's Institutions (PIs); the viability of PIs created by AHADS at Attappady with the evidence of primary data is discussed in Chapter Six. Chapter Seven summaries the major findings of the Study and offer recommendations for future course of action.

Limitations of the Study

1. Quick Evaluation Study

The Attappaddy Wasteland Comprehensive Environmental Conservation Project (AWCECOP) is a multi – faceted project with multi objectives. Improvement of the livelihood of local tribal communities constitute only one among the many objectives of the larger project. But the present study is exclusively focused on the socio economic dimensions, especially on the question of improvement of livelihood of the local tribal population. The eco-restoration programme and environmental aspects are not taken in to consideration.

The project was implemented in three Panchayats of Attapady Block covering 3581 families. The survey covered only 10 percent of the families (250).

2. Lack of Time Series Analysis of base line data.

The DPR prepared for the implementation of the project has not incorporated the basic statistics of the targeted communities. As a result no comparison has been made in data related to income, employment, education and other social aspects of the benefited tribal communities.

3. Lack of uniform indicator for estimating Livelihood Sustainability

In order to improve livelihood sustainability of the Tribal communities in Attappady, AHADS had attempted to influence various aspects of their life such as access to food, education, health, habitat, social network participation, environmental protection, income generating activities and skill development. Outcome with respect to such various aspects of livelihood are difficult to be measured and analysed. The indicators are not uniform or standardised and the measures are mostly locations specific.

End Notes

1. AHADS, 2008, *Status Report 2008*, Agali, Palakkad
2. AHADS, 2003, *National Review on Attappady Wasteland Comprehensive Environmental Conservation Project*, Agali, Palakkad.
3. KSLUB (Kerala State Land Use Board), 1994, *Integrated Study for Sustainable Development of Attappady Block, Palaghat District*, Thiruvananthapuram.
4. AHADS, 2003, *Op.Cit*.
5. AHADS, 2008, *Op.Cit*.
6. *Ibid*

CHAPTER- 2
REVIEW OF SELECTED STUDIES ON AHADS

The present Chapter surveys some of the important studies, which analyze the activities, strategies and performance of AHADS ranging from ecological restoration to livelihood security and to the sustainability of the Project. Evaluation Study of Institute of Societal Advancement, Thiruvananthapuram, Mid-term Evaluation by Institute of Rural Management, Anand, Study of Wilber Smith Assocates, Inc, Bangalore and the Study of Department of Geology, Kerala University, Thiruvananthapuram are the major contents of this Chapter.

2.1 Evaluation cum Documentation of AWCECP by Institute for Societal Advancement, Thiruvananthapuram[1]

This Study documents, assesses and evaluates the planning, design and implementation of the project. Project concepts, strategies, implementation, socio-economic changes, technological innovations and lessons learned are discussed and the sustainability and replicability aspects are examined in detail in the Document. It covers the socio-economic evaluation of local community in Attappady as well. Evaluation through a survey of stratified random sample of households revealed that more than one third of the tribal families have less than 10 cents of land; only 23% among them hold above 2 acres. Non-tribal are better off; 14.77% had 10-50 cents, whereas the percentage of tribal families in this category was only 2.84%. The income earned by tribal families (43%) from land was a mere Rs.5000 per annum. For 86% of households wage labour was the major source of income. Drinking water and sanitation situation of tribal families was also precarious; only 57% of households have drinking water in their premises, 76.2% did not have any safe sanitation arrangements; 84% did no have any arrangement of waste water disposal.

The major lessons learned, as mentioned in the ISA Report include the following.

- Eradication of poverty: The document states that the project has proved to be a good replicable model of poverty eradication through participative eco-restoration.
- People's Participation: Involvement of all stakeholders, especially the poor, from the beginning of planning any programme is very necessary for getting effective participation.
- Eliminating corruption: Poor have shown their ability to come together through local organizations like UAs, OVSs, JFMCs, TKSs, and IGAGs and work for their well-being, keeping out the corrupt and the vested interest groups.
- Impact of additional income: The additional income has eliminated symptoms like poor food intake, shortage of clothing and poor health; it also helped in better housing, children's education and above all created self-esteem and confidence.
- Development of inaccessible areas: The inaccessible areas of Kurumba tribes in the Reserve Forest of Silent Valley core areas has remained in-penetrable for the development efforts; which got tremendous stimulus under AHADS efforts.
- Neglect of own lands by ST owners: AHADS should program more works in tribal fields, so that the program will enable them to work for wages in their own fields.
- Preference for rice and dependence on trade channels for food items: As income from wages rise and started neglecting cultivation in own fields, local people are becoming dependent on trade channels for purchase of food grains and their preference is for rice.
- Afforestation in private land: This is a peculiar form of subsidy that have been enjoyed by affluent, non-tribal non-residential land-owners, who were able to stall the payment of betterment levy.
- Adoption of appropriate technology: Poor people have proved their ability to learn many simple technical activities related to land, water

and biomass development and implement the program themselves with the help of these technologies.

- Institutional setup: The responsibility of initiating project formulation, its finalization and implementation should lie with grass-root level organizations; constant vigil and support of AHADS can improve the performance of the local organizations.
- Ecological restoration: Due to lack of quantification of the ecological degradation and to develop the base line data, it is difficult to assess the progress made.
- Sustainability: Long term sustainability of reasonable quality of livelihood will require careful planning of land for improved fertility, of water for increased supply and of biomass for sustaining better income. With rising property prices and improved living conditions, issues of equity and sustainability of gains for ST people and the poor become sharper than before.

The Report concludes with a brief suggestion on sustainability and replicability of the AHADS model.

2.2 Mid Term Evaluation by Institute of Rural Management (IRMA), Anand[2]

AHADS assigned the mid-term evaluation of the Attappady Wasteland Comprehensive Environmental Conservation Project to IRMA. The broad objective of the Study was to examine whether there has been any indefinite delay in implementing the Project, taking into account all the constraints, and to suggest remedial measures. Detailed interviews and discussions held with different stakeholders found out the important factors for delay in implementation of the Project, which include the following.

- Lack of preparedness of the Project at the time of sanction: The Project did not have directly implementable micro plans at the time of sanction of the Project in 1996.
- Delay in appointment of the international consultant: There was significant delay in the appointment of the international consultant

required to facilitate the process of implementation as per the terms and conditions of the loan from OECF.

- Restructuring of Project Proposal: It was realized in 2001, the social sectors are not incorporated into the project adequately.
- Nature and objectives of the Project: The Project combined together the objectives of eco-restoration, people's participation, livelihood and sustainability; eco-restoration itself requires long term involvement.
- Lack of sufficient autonomy to AHADS: AHADS did not have full autonomy in making decisions related to the project.
- Delay in appointment of Project Staff and related issues including high turn over of key project staff and lack of sufficient training.
- Government Owned NGO (GONGO) Nature of AHADS: The bureaucratic procedures and poor stakes in decision making contributed to delay in implementation.
- Lack of clear government stand on Joint Forest Management: Forest Department of Kerala and AHADS could not sort out various issues with regard to their respective roles and responsibilities for implementation of JFM on time.
- Phase-wise Sectoral approach was followed initially for implementation of the project, which slowed down the process of implementation as well as created impatience in the areas that were to be taken up for implementation later.
- Hostile environment and groups: AHADS has faced hostility from different groups of people. It attempts to disengage local tribal people from production and consumption of Ganja and liquor, which has antagonized the anti-social elements as their business interests are hurt.
- Lack of proper coordination with Panchayat Raj institutions: Some conflicts emerged between AHADS and PRIs due to overlap in some of the activities undertaken, which delayed requisite approvals and thus contributed to delays in implementation of some project activities.

The IRMA Report also reviewed the achievement of Project objectives.

- Regarding the first objective of ecological restoration of degraded wastelands, it says, 'It is difficult to assess the extent of eco-restoration in the absence of operational meaning of the term in the project document. Further, the required benchmark information on ecological status of the degraded wastelands at the time of taking up the project is not available for comparison.'
- The second objective of development of replicable models of participatory eco-restoration to prevent further degradation has attempted through formation of people's organizations. The extent of people's participation has been relatively more in case of UAs due to continuity of variety of activities; however, in the case of JFMCs it was limited due to lack of clarity about the distribution of rights and responsibilities in the absence of registration and approval by bye-laws, In the case of OVSs too, there have been very limited opportunities available for decision making due to lack of resources and absence of registration and approval of bye-laws.
- The third objective was to promote sustainable model of livelihood for local people in harmony with the resource base. The eco-restoration programmes are anticipated to provide sustainable income and livelihoods to the people. The Report states that the sustainability of various sources of livelihood and income generating options for local people has yet to be established; many of the income generating activities have faced problem of limited market demand.

The Report also offers remedial measures for increasing the pace of implementation and to achieve project objectives.

The remedial measures offered for increasing the pace of implementation include the following.

- Employment of additional trained and experienced staff and exposure to the existing staff.
- Involvement of good local NGOs in implementation.
- Improvement in coordination with PRIs.

- Greater involvement of State Forest Department in JFM.

Remedial measures to achieve project objectives include the following.

- Development of indicators for project objectives; it is important to have a shared understanding of the operational meanings of these terms and accordingly evolve appropriate indicators for their measurement.
- The regular monitoring process followed by AHADS has remained confined mainly to the financial and physical targets; along with this regular monitoring of various indicators that reflect the achievement of project objectives is needed. Various participatory methods and surveys can be used to monitor socio-economic parameters.
- It should be ensured that people have significant stakes in various activities taken up for implementation, which include cash and kind contribution from the beneficiaries.
- Sustainability of UAs requires some more efforts and thinking in terms of making them economically sustainable and ensuring that they operate in a socially and environmentally sustainable manner.
- Sustainability of JFMCs requires finalization of bye-laws and registration of JFMC should be expedited to give this institution the necessary legal status and authority.
- Sustainability of OVSs requires that they should be given suitable project activities for implementation to build up their capacities and to earn some initial funds.
- TKSs may be linked formally with the UAs and OVSs to provide them the required sustenance and strength.
- There has to be a link between different organizations of the people created at different levels to derive mutual support and sustenance.
- The income generating activities should have the potential for involvement of large number of poor people as well as a growing and large market. It may be easier to integrate such activities at a higher level to get the benefits of economies of scale and scope.

- Appropriate training and exposure of the AHADS staff and local people will help to increase the effectives from the Project.
- Plurality in decision making by following one-person-one post principle may be followed to get a shared vision.

The Report concludes by considering the credibility of AHADS and the importance of the project to the area, so as to extend the implementation period by few more years.

2.3 Study of Wilbur Smith Associates Inc, Bangalore[3]

The Study is based on the assessment conducted for 2006-07 and the first two quarters of 2007-08.

The following key success factors were identified by the study team evaluating AHADS' performance in 2006-07 and H1, 2007-08.

- Under *Private Land Development*, introduction of commercial crops led to generation of greater demand among the community;
- Under *Forest Land Development*, formation of JFMCs (cohesive groups able to contribute to achievement) improved relations with Forest Department;
- Under *Water Resources Development*, AHADS' policy decision to undertake WRD in private land, led to greater demand and ownership among the community;
- Under THDP, the decision to bear actual costs has been taken, hence works have speeded up;
- Several new initiatives (MIS, IGA, bio-gas, summer ploughing, grading of PIs, social fencing, restructuring of Civil Division) in the assessment year has yielded results.

Using secondary information from various sources the Study also concluded that:

- Increased forest cover/ green cover in Attappady;
- Increased soil moisture regime, which is reflected in increased agricultural production; and
- Increase in ground water level.

The Focus Group Discussions, which are part of the Study, have revealed the following.

- Increased farm wage employment and reduction in poverty;
- Increased awareness, people's participation, development of community institutions and social capital.

The Study recommended the following on the basis of the Project's Status in 2007.

- Private land development: Land development and diversification of crops and maintenance only;
- Forestry: Review of status of existing project areas and consolidation activities only in plantation and biomass conservation;
- Water resources development: Small structures and maintenance activities recommended;
- Total Hamlet Development Programme (THDP): Enter into community contracts only until 2008-09;
- Human resources development: All AHADS staff training to be completed by 2008-09 and People's Institutions' training by 2009-10.

The Study also recommended for strengthening AHADS project implementation, which includes strengthening project information, strengthening PIs, strengthening participatory planning process, strengthening field implementation, and strengthening project MIS.

The recommendations for the sustainability of the project include, preparation of a Vision document for strengthening the AHADS, implementation of sustainable livelihood programmes including livestock development and other income generating activities, women and tribal youth development programmes, etc.

2.4 Study of Department of Geology, Kerala University, Thiruvananthapuram[4]

The main objective of the Study was to review the land use at Attappady to see the changes that occurred between 2001 and 2005. The land use/ land cover of Attappady block during 2001 has been found out based on the remote sensing data; IRS 1C LISS III data was used to find out the land use details. The spatial variation of the land use/ land

cover categories during 2005 has been found out by using the remote sensing data of LISS III sensor of IRS P6. Digital Terrain Model (DTM) of the Attappady block has been prepared by digitizing contours of 1:25,000 scales. The land use classes derived from the IRS P6 LISS III data of 2005 has been overlaid over the DTM to give a better representation of the land cover. The spatial distribution of each and every land use category generated for the years 2001 and 2005 has been over laid and compared to appreciate its temporal changes. The study found that few land use categories have extended its spatial distribution and some other classes had shrunk during the period (See Table: 2.1).

Table: 2.1 Land Use Changes in Attappady, 2001-2005

Land Use Categories	Land Use in 2001		Land Use in 2005		Land Use Changes	
	Km^2	%	Km^2	%	Km^2	%
Forest Land						
Evergreen Forest	117.00	15.69	124.73	16.72	+7.73	+1.03
Open Evergreen Forest	23.97	3.21	8.87	1.19	-15.10	-2.02
Deciduous Forest	80.85	10.84	85.20	11.42	+4.35	+0.58
Open Deciduous Forest	99.36	13.32	144.23	19.34	+44.87	+6.02
Degraded Forest	57.29	7.68	20.07	2.69	+37.22	+4.99
Forest Blank	0.09	0.01	0.27	0.04	-0.18	-0.03
Forest Plantations	8.36	1.12	17.95	2.41	+9.59	+1.29
Agricultural Land						
Single Crop	33.05	4.43	51.00	6.84	+17.95	+2.41
Double Crop	6.82	0.91	11.10	1.49	+4.28	+0.58
Agricultural Plantations	79.68	10.68	101.94	13.67	+22.26	+2.99
Degraded Land						
Scrub Land	132.85	17.81	107.73	14.44	+25.12	+3.37
Barren Land	0.75	0.10	2.71	0.36	-1.96	-0.26
Permanent fallow	104.58	14.02	69.08	9.26	+35.50	+4.76
Water Bodies	1.26	0.17	1.07	0.14	-0.19	-0.03

Source: Department of Geology, 2007

The study showed that the negative impacts are given by few land use classes such as open evergreen forests, forest blank, barren rocky and water bodies, among which the temporal changes shown by the later three land use classes are inconsequential. At the same time, the temporal change exhibited by the open evergreen forests should be a matter of concern.

The comparison of the land use classes with respect to their temporal variation shows the positive impact of the eco-restoration project of AHADS. The study concludes that there is commendable increase in the extent of agricultural lands and decrease in the degraded land. The forest sector also shows positive impacts, especially in the case of degraded forest and forest plantations.

End Notes

1. P.K Sivanandan, *Evaluation cum Documentation of AWCECP*, Institute for Societal Advancement, Thiruvananthapurm.
2. Rakesh Saxena, et.al., 2006, *Mid Term Evaluation of Attappady Wasteland Comprehensive Environmental Conservation Project, Kerala,* Institute of Rural Management, Anand.
3. Wilbur Smith Associates Inc. 2007, *Attappady Waste Land Comprehensive Environmental Conservation Project: Independent Annual Evaluation of Project Progress*, Bangalore.
4. Rajesh Rahunath, 2007, *Assessment of Land Use Changes in Attappady*, Department of Geology, University of Kerala, Thiruvananthapuram.

CHAPTER-3
DEVELOPMENT ACTIVITIES OF AHADS: AN OVERVIEW

Introduction

AHADS was constituted to restore the resource base and secure the livelihoods of the inhabitants of the Attppady hills. The approach of implementation is based on the principle of Community Governance through grass root level People's Institutions (PIs), ensuring participation and transparency. Afforestation, biomass development, water resources and promotion of sustainable Income Generating Activities (IGA) are attempted through community based organizations, ensuring micro-watershed based governance of resources. This Chapter reviews the approach of AHADS towards eco-restoration and sustainable livelihood security.

Project Approach

AHADS was formed on the foundation of participatory governance of resources, which places faith on the ability of local people to appreciate concerns of environment and development, and if capacitated appropriately within a people centric administrative environment, to transform into instruments of practicing equity and distributive justice[1]. Watershed as a natural boundary was taken as the unit of development, so that inhabitants of a particular watershed participate in its regeneration. Recognizing the sequential nature of poverty and environmental degradation, AHADS evolved its working methodology on participatory management principles through trial and error. AHADS emerged as an institution that integrates various stakeholders and their interests for strengthening synergy between environmental conservation and social development.

Utilizing participatory planning tools along with various eco-restoration and livelihood security activities micro-watersheds were organized as the Project implementation unit. Procedures and protocols were prepared for assisting the PIs to function as local governments. The funds to implement various activities, such as raising

forestry plantations, conserving biomass areas to assist natural regeneration, and works related to soil and water conservation, minor irrigation and agriculture development, total tribal hamlet development etc, were identified in the donor agency approved implementation plan, and released to AHADS by the Government of Kerala. In turn, AHADS placed funds in the accounts of the PIs and provide technical support to them for implementing various agreed activities and claim reimbursement from the JBIC (JICA). Since the people themselves have to make implementation arrangements, AHADS would invest a great deal in human resources development, through which local people were provided various kinds of skills and knowledge upgradation trainings, so as to help them in executing public works of massive financial and technical sizes with full transparency and accountability.

While the project implementation began with the UAs, it was subsequently recognized that tribal communities must have their own governance in dealing with issues that specifically impinge upon their development. Thus, 166 OVSs located within various micro-watersheds were organized independent of the UAs, for participatory planning and implementation of public works, which would directly benefit them. Recognizing the cultural uniqueness and traditional value systems of the tribal people, the tribal elders and traditional institutions were included in the modern, democratically constituted Executive Committees of the OVSs. This helped in integrating the democratic principles of modernity with the traditional and organic structure of tribal societies. Recognizing the ability of women in quickly appreciating the benefits of development, the tribal women were mobilized into social corrective forces and income generation activity groups. Tribal land development, minor irrigation, housing and sanitation, alternative education programmes and promotion of tribal arts, culture and traditional practices etc. were implemented by various OVS committees supported fully by the Project.

For implementing Project activities in the government owned forest areas, authorization from the Kerala Forest Department was obtained by AHADS to let project-constituted JFMCs manage these lands. In consonance with the national and state policy directions, the JFMCs effectively regenerated the degraded forests of Attappady hills.

Project Implementation

For the purpose of project implementation, 745 square kilometer area of Attappady is divided into 146 micro-watersheds; of which only 93 have habitations and hence 93 micro-watershed based User associations (UAs) have been constituted democratically. Within the ambit of the UAs, all tribal settlements have their own Ooru Vikasana Samithy (OVS), looking after tribal land and social developments. To reach out to all corners of Attappady simultaneously, the Project is implemented through five multi-disciplinary watershed teams, constituted of the staff working in AHADS (See Figure: 3.1). This geographical division is to enable smooth and time bound implementation of eco-restoration activities. Five multi-disciplinary teams with experts from various fields like forestry, agriculture, soil conservation, civil engineering and extension, headed by a team leader facilitated and monitored the project implementation.

Ecological Restoration

Watershed based comprehensive natural resources management model envisaging treatment of degraded lands from ridge to valley has been developed and being replicated in the project area. Forest regeneration works including soil and moisture conservation, gully plugging, planting and fencing works have been completed by JFMCs in 11,000 ha of State forestland[2]. Similarly, over 7367 ha of private wasteland has been treated with soil and water conservation work and planted with suitable income-fetching tree plantations. The survival rate of trees planted ranged between 62% - 68%. These works are reported to have enhanced green cover in Attappady, reduced surface run-off and improved the subsurface water regime, resulting in rejuvenation of dry streams, resulted an increase in the overall agricultural activity and extent. For details on land use changes in Attappady see Table-3.1 and Figure: 3.2; forest land expanded by 3-4% between 2001 and 2005 and agriculture land increased by 37%. During the same period degraded lands declined by 24%.

Figure: 3.1 AHADS Project Implementation Team

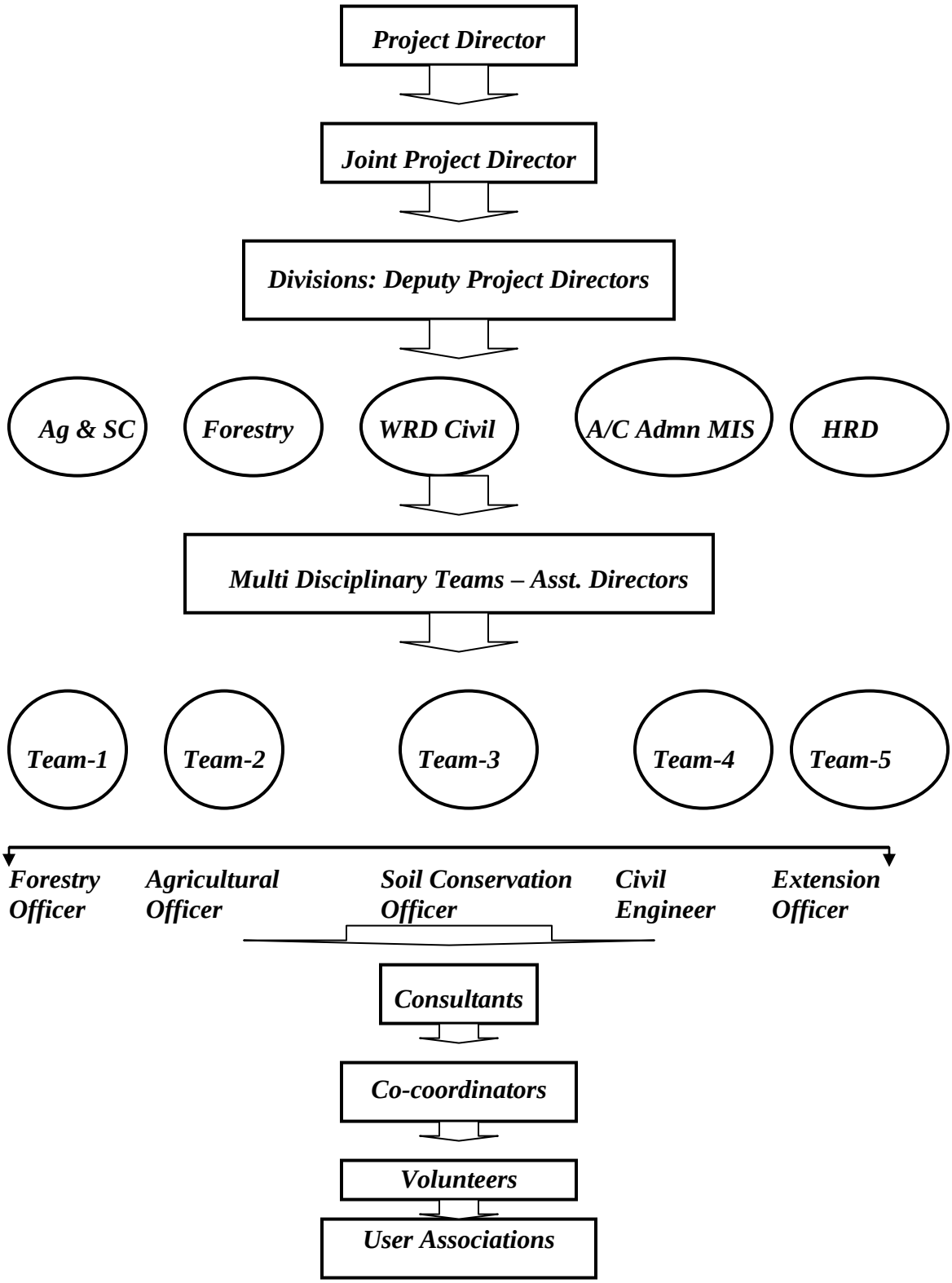


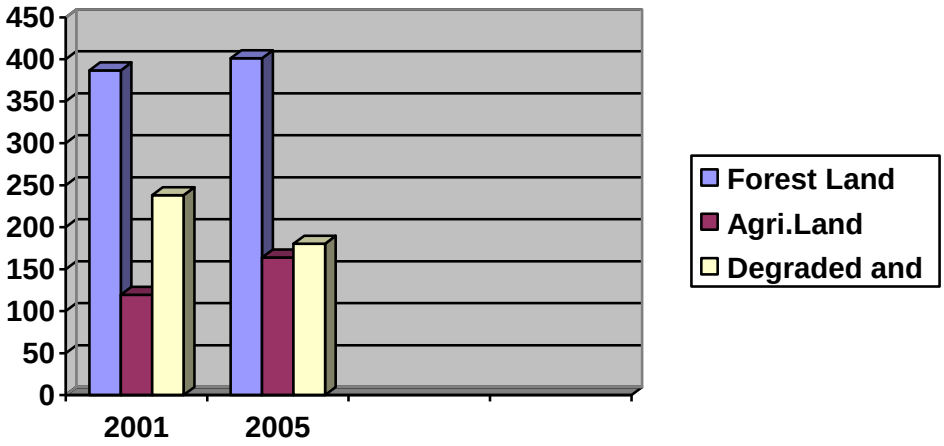
Table: 3.1 Land Use Changes in Atappady, 2001 to 2005

Major Land Use	Land Use (Km^2)		Percentage Change in Land Use
	2001	2005	
1. Forest Land	386.84	401.32	+3.74
2. Agricultural Land	119.55	164.04	+37.21
3. Degraded Land	238.18	180.24	-24.33

Source: Dept. of Geology, University of Kerala, *Assessment of Land Use Change in Attppady*, July, 2007.

Seven million plants, both in the State forestlands and private wastelands, have covered the otherwise degraded and fallow lands of Attappady due to the project implementation. It is reported that the survival rate of plants in forest areas was about 70% and in the private wastelands it was 62%. The growth of the planted stock has brought back the greenery with significant positive future implications as we mentioned earlier.

Figure: 3.2 Land Use Changes in Attappady, 2001-2005



Source: Dept. of Geology, Kerala University, 2007

Table: 3.2 Afforestation and Biomass Conservation in Attappady by AHADS

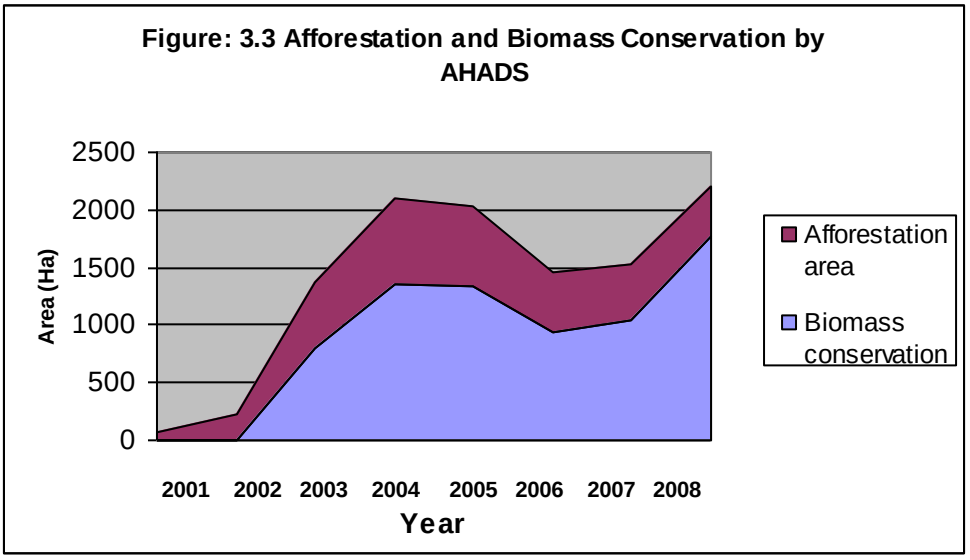
Year	Area Under Biomass Conservation (Ha.)	Area Under Afforestation (Ha.)
2000-01	-	69.21
2001-02	-	226.50
2002-03	792.20	573.67
2003-04	1347.81	750.89
2004-05	1334.30	703.78
2005-06	941.70	522.26
2006-07	1033.29	501.65
2007-08	1774.36	428.29

Source: AHADS, *Status Report*, 2008

The degraded lands were ecologically unstable with almost complete loss of top soil and were unsuitable for cultivation due to decline in their quality and productivity. Project interventions were devised for three broad categories of land use, viz. private degraded lands, non-forest public degraded lands and degraded forest lands. Area under biomass conservation increased from 792 ha. in 2002-03 to 942 ha by 2005-06 and further to 1774 ha. by 2007-08. Area under afforestation increased by 985 % between 2000-01 and 2003-04; by 2007-08, it was around 428 ha. Between 2001-2008 period agro-forestry plantations in private land expanded by 93% (See Table: 3.3 and Figure: 3.4).

Afforestation and soil and water conservation activities, both in forest and private wastelands have resulted in rejuvenation of streams that have completely dried away decades ago. The Kodungarapallam river that used to flow only during the rainy season has been flowing through out the year these days. Similar stories emerge in case of Varagar, the tributary of Bhavani River. Other streams such as Alamarapallam, Dhaliyarpallam, Uppungarapallam, Puliyapathi stream, etc. have also been showing improved annual discharge levels of water. The attempts in the Project to ‘Make the

water walk instead of Run' have greatly enhanced sub-surface water availability resulting in high discharge of water into the streams.

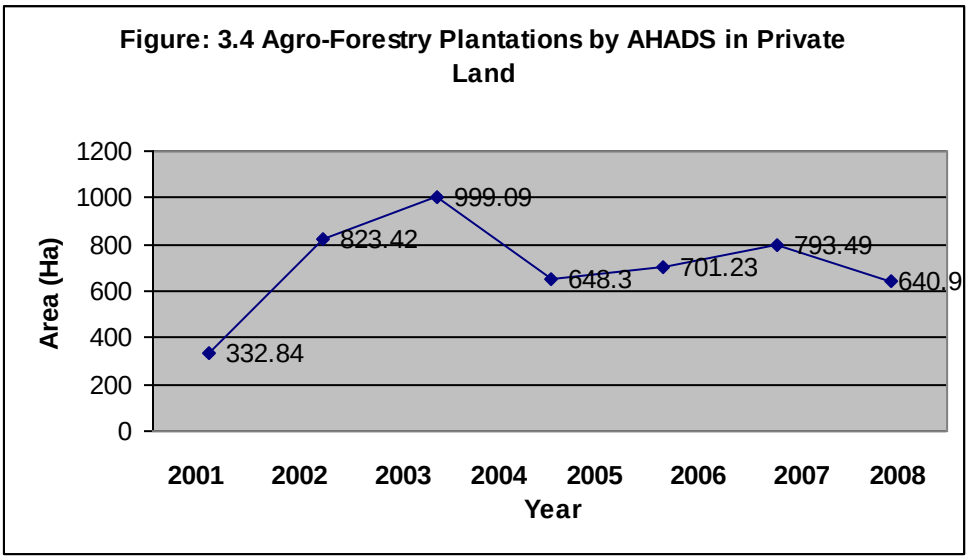


Private waste land development works under the Project was envisaged to improve degraded wastelands in the Project area. Land development works consisting of contour trenching and bunding were undertaken in identified areas. This was followed by summer ploughing and cultivation of traditional crops with the onset of Monsoon. In addition to this, support was given to promotion of traditional crops so as to improve organic matter content of the soil and to increase its water holding capacity.

Table: 3.3 Agro-Forestry Plantations by AHADS in Private Land in Attappady

Year	Treated Area (Ha)
2001-02	332.84
2002-03	823.42
2003-04	999.09
2004-05	648.30
2005-06	701.23
2006-07	793.49
2007-08	640.90

Source: AHADS, *Status Report*, 2008



Forest waste land development interventions under the Project are carried out in State Forest lands and other government lands. Two distinctive approaches followed under the Project include biomass conservation and afforestation (development of degraded forest areas and afforestation of village lands that we already discussed in Table: 3.2).

Natural regeneration of existing forest resources through controlling biotic interferences is the prime strategy followed under this intervention. Activities carried out under this head are fire protection works, watch and ward, soil and moisture conservation activities (structural and vegetal), barbed wire fencing, etc. Degraded forest areas are developed with the help of JFMCs. Under this approach, suitable forest tree species are planted in identified areas. Further, these areas are also protected against biotic interferences.

Soil and Water Conservation

Controlling the ravines and gullies that are prominent features of erstwhile Eastern Attappady is the key to rejuvenation of rivulets and wells. Running water from hilltops is made to walk the valley and percolate beneath arid tracts through series of gully plugs and percolation ponds[3]. As can be seen in Table: 3.4, between 2001 and 2008, 4433 checkdams are constructed other than Bench terrace (2739 M), Contour bunds (379628 M), drains (49332M), etc.

Table: 3.4 Soil and Water Conservation by AHADS in Private Waste Land, 2001-08

Structure	Unit	Conservation
1. Bench Terrace	M	2739.33
2. Contour Bund	M	379627.50
3. Check Dam	Nos	4433
4. Drains	M	49332.05
5. Fencing	M	670.70
6. Half Moon Terrace	Nos	218041
7. Retaining Wall	M	19916.80
8. Trenches	Nos	1913809
9. Earthen Dam	M^3	31366.10

Source: AHADS, Status Report, 2008

Table: 3.5 Water Resources Development Activities of AHADS, 2000-08

Activities	Units	Achievements
Development of Water Resources		
1. Base Flow Diversion System	Nos	3
2. Open Well	Nos	61
3. Ponds	Nos	22
4. Rain Water Harvesting System	Nos	63
5. Spring Potection	Nos	22
6. Check Dams	Nos	81
Ground Water Recharging Systems		
1. Recharging Ponds	Nos	1277
2. Acquirer Recharging	Nos	59
3. Subsurface Dyke	Nos	2
Irrigation Systems		
1. Gravity irrigation systems	Nos	29
2. Irrigation channels	M	959
	Ha	33
3. Lift Irrigation syetms	Nos	26
	Ha.	96
4. Mobile irrigation systems	Nos.	60
	Ha.	45
5. Tanks	Nos	78

Source: AHADS, Status Report, 2008

Activities are undertaken with the objectives for protection of existing water resources and to enhance recharge of aquifers in order to ensure water availability on a sustained manner. It includes development of water resources, ground water recharging systems and irrigation systems (See, Table: 3.5). Development of water resources include base flow diversion systems, open wells, ponds, rain water harvesting systems, spring protection and check dams. Recharging ponds, aquifer recharging and such surface dyke include ground water recharging systems. Gravity irrigation, irrigation channels, lift irrigation, mobile irrigation and tanks are the major schemes implemented under irrigation systems by AHADS.

Hundreds of thousands of trenches, pits, water retention and harvesting structures constructed over the Project period was reported to have improved ground water availability. The dry wells of Eastern Attappady have increased their water levels by 5 – 40 feet. It was reported that in previously dry and semi-dry wells, the water availability has increased substantially from 7 – 37.8 cubic meters per day[4].

Total Hamlet Development Programme

Land based development, whether it is soil and water conservation or afforestation, tended to benefit the rich; tribals, who had been dispossessed of their best lands, could not derive benfits from the programs undertaken through the UAs. Accordingly the Total Hamlet Development Programme (THDP) was included as part of the Project. It involved planning, designing and constructing living space to suit the needs of each individual family based on their needs, cost-effective water supply and sanitation systems, and facilities for education, recreation and cultural activities[5].

The Project implementation is planned in such a way that the Project benefits directly reach the tribal communities. As mentioned earlier, in Attappady 41% of the total population are tribes[6]. The activities such as Total Hamlet Development Programme, Environmental Literacy Programme, and the construction of Community Resource Centres are exclusively for the development of the tribal population. These programmes, along with construction of access roads to hamlets and other hamlet development programmes are implemented by the Ooru Vikasana Samithis (OVS) themselves. The

Project has been programmed for the empowerment of tribal people, so that their informed participation in the development programme is ensured.

In and around a typical hamlet, there are two categories of land – the common land (Ooru Bhumi) and individual holdings[7]. For economic and related reasons the inhabitants tend to neglect these lands. THDP envisaged proper usage of the common land for community benfit, eg. planting with fruit trees, landscaping etc. Further, the individually owned lands were developed by adopting landscaping, irrigation and cropping practices, with the anticipation that the tribal families would get sustainable benefit from them. Thus the THDP aims to address total habitat development plan for tribal areas, which envisages comprehensive development by incorporating the social, cultural and individual needs through participatory approaches from planning, execution, implementation, and usage ensuring transparent and tribal empowerment practices.

Housing and landscaping, accessibility, drinking water supply, environmental hygiene and sanitation, sustainable farming systems and livelihood generation are the major components of the programme[8]. An outline of major achievements reported under the THDP are given in Table: 3.6.

Table: 3.6 Major Achievements under the THDP, 2008

Particulars	Achievements
1. Number of new houses proposed	852
2. Number of houses proposed for modification	98
3. Work completed	296
4. Ongoing work	425

Source: AHADS, Status Report, 2008

Regarding the construction works, the IRMA study[9] highlighted that contracts signed in 2004 were as per the PWD schedule of rates prevailing at that time. Due to escalation in costs and the consequent financial crunch and the pressure on the community to make good the loss, progress of the work has either been adversely affected or in certain cases abandoned or not initiated at all. However, the PWD has revised the Schedule of Rates in March 2007. These unanticipated events constrained the construction activities and lead to cost escalation.

Other programmes targeted for the socio-economic improvement of tribal people include Community Resource Centre for capacity building at the hamlet level, construction and maintenance of access paths to hamlets and environmental literacy campaigns.

Table: 3.7 Other Benefits from the AHADS to the Tribal Communities

Particulars	Achievements
Community Resource Centre	
1. No. of Hamlets selected	81
2. Physical target	81
3. Physical achievement	49
4. Financial target (Rs in Crores)	2.72
5. Financial achievement (Rs in Crores)	1.94
Access Path to Hamlets	
1. Benefited hamlets (Nos)	63
2. Completed access path (Km)	43.82
3. Financial achievement (Rs in Crores)	4.06
Environmental Literacy	
1. Hamlets having ENLITE people	84
2. No. of learners	1500

Source: AHADS, Status Report 2008

Major Achievements of the Project

The Project has helped to a great extent in improving the landscape of Attappady and has assisted local people, especially tribal communities to overcome poverty to a considerable extent. It generated people's movement for demand driven development. The Project has shifted development discourse from that of contractor-centered to people-centric, transparent and accountable implementation[10]. Major achievements of the project include the following.

i. *People's Participation*: Participatory development is being led by 597 PIs that include 5206 Executive Members; almost every third person in Attappady is associated with some PI of the Project[11]. People are involved right from the planning to execution of activities.

ii. *High Women Participation*: Women actively participated in all activities, particularly in social corrective measures; 63% of the representatives in Executive Committee of various PIs are women[12].

iii. *High Tribal Community Participation*: The 166 OVSs ensured full participation of all tribal groups in the development activities; 85% of tribal are represented in the Executive Committees (ECs) of PIs[13].

iv. *Good Governance:* Equitable and transparent implementation arrangements enabled the benefits of the Project reach the most deserving masses. Regular annual General Body meetings make the Executive Committees accountable to the beneficiaries. Democratic organization of PIs and annual social audits enhanced good governance.

v. *Watershed approach:* The fact that development activities are based on total watershed conservation and development ensures better integration and judicious distribution of financial and human resources.

vi. *Integrated Approach:* The various ecological and socio-economic components of the Project are implemented in an integrated manner through multi-disciplinary teams, responsible for taking rational decisions.

vii. *Adaptive Management*: In the absence of suitable replicable models for eco-restoration, the experience of AHADS evolved through its own design is a constant source of inspiration. 'Doing through learning and learning through doing' are the guiding principles for adapting strategies and approaches in the Project implementation.

viii. *Empowering people as Instrument of Distributive Justice*: Through various out reach actions such as constant awareness programmes, trainings, exposure visits, environment literacy, dropout reduction, equitable distribution of benefits among beneficiaries etc, the Project attempts to improve social capital, thereby creating new avenues for development planning and implementation. The Project took special care of the marginalized and backward people so as to enhance their capacities and skills to regenerate environment and take development to their doorsteps.

Critical Assessment

It is obvious that the physical and financial progress of the Project has been slow in particular in the early years. The achievements regarding some specific activities like environmental improvement, human resources development and income generation have been abysmally low as compared to the targets. Even though the total budget outlay to AHADS since 1996-97 was a mopping Rs.42,122 lakhs, actual expenditure was only Rs.17,477 lakhs (42%). Till 2005, actual expenditure never reached 50% of the budgeted outlay; however, since 2005 it never went below 50% (See, Table: 3.8 and Figure: 3.5).

Table: 3.8 AHADS' Budget Outlay and Expenditure (Rs in Lakhs), 1996-2010

Year	Budget Outlay	Total Expenditure*	Expenditure as a % of Outlay[#]	Cumulative Expenditure
1996-97	523	56.72	11	57
1997-98	390	56.07	14	113
1998-99	1500	66.23	4	179
1999-2000	1500	475.10	32	654
2000-01	1500	584.46	39	1239
2001-02	1743	811.09	47	2049
2002-03	3300	1081.50	33	3131
2003-04	5721	1462.2	26	4593
2004-05	7500	1976.9	26	6570
2005-06	3804	2278.6	60	8848
2006-07	3041	2301.9	76	11150
2007-08	3000	2600.6	87	13751
2008-09	3000	2920	97	16671
2009-10	5600	806.20[@]	14[@]	17477[@]
Total/Average	42122	17477	42	17477

Note: * Include interest in foreign currency

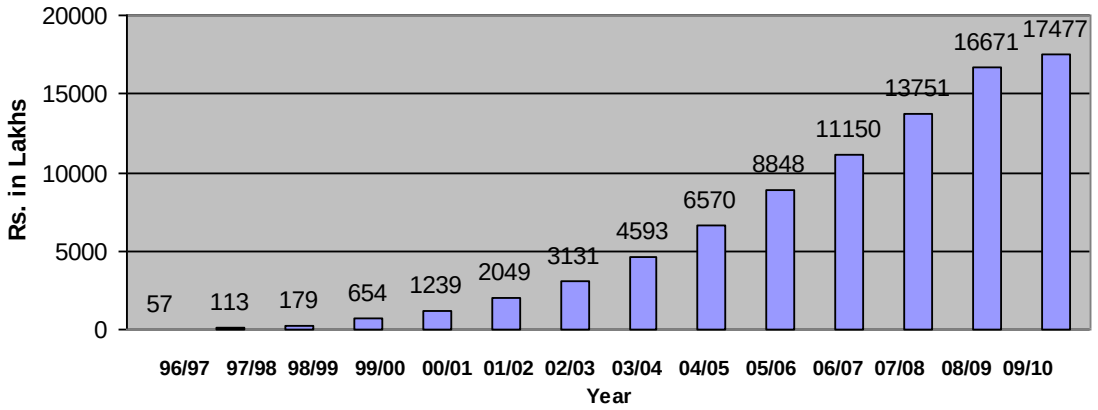
Even though the budgeted outlay was Rs.42122 lakhs, only Rs.16863 lakhs (40%) was released.

@ Anticipated

Source: AHADS, Annual Plan Proposal for 2010-11

The achievements of social components in general are lower as compared to others, till the launching of THDP; on the other hand, if sufficient attention would have given for this component from the beginning, it would have positively influenced the overall impact at the grass root level. One of the major reasons for delay in implementation at the early stage was the initial phase-wise strategy of implementation and restructuring at the later stage.

Figure: 3.5 Cumulative Expenditure of AHADS



The Model adopted under the Project combined together eco-restoration, participation, and livelihood with a focus on under privileged sections and implemented through PIs. This was a win-win situation for all. However, it could not develop measurable indicators for each components to assess the progress and monitoring mechanism was too week. The objectives of the Project are such that a longer time span is required for their realization.

Based on various organizational aspects of AHADS, the reasons for delay in implementation can be summed up as follows[14].

- The autonomy of decision making by AHADS has been constrained by the High Power Committee; approval from it delayed the implementation of various decisions.
- The Governing Body and staff positions of AHADS are dominated by government officials, which have influenced the mindset and culture of the organization including the high turn over of key project staff.

The strategy of integrated micro-plans at micro-watersheds level required for eco-restoration has taken more time than envisaged due to lack of initial preparedness and a hit and trial approach followed in decision making. The strategy of creation and sustainability of democratic organizations of people required for sustained participation of people has also taken up its due time which was perhaps underestimated in the planning process. The income generating activities initiated did not have sufficient marketing tie-ups.

Even though AHADS maintained sound relationship with governmental and non-governmental organizations, its relation with such organizations within the Project area was not smooth, including the Peoples' Institutions. Lack of co-ordination between PIs created by AHADS and that of Panchayats missed the immense leverages and even the sustainability of such institutions created by AHADS.

Considering the credibility of AHADS and the importance of the Project to the area, AHADS can continue as an umbrella organization even after the Project has been completed; otherwise, local governments should provide support and guidance to different institutions of people created as part of the Project.

End Notes

1. P.K Sivanandan, *Evaluation cum Documentation of AWCECP*, Institute of Societal Advancement, Thiruvananthapuram.
2. AHADS, 2008, *Status Report: 2008*, Agali, Palakkad.
3. *Ibid.*
4. Rakesh Saxena, et.al., 2006, *Mid Term Evaluation of AWCECP, Kerala*, Institute of Rural Management, Anand.
5. AHADS, 2006, *Status Report: 2006*, Agali, Palakkad.
6. *Census Reports, 2001.*
7. Kerala State Land Use Board, *Integrated Study for Sustainable Development of Attappady Block, Palaghat District, Kerala*, Thiruvananthapuram.
8. AHADS, 2008, *Op. Cit*.
9. See Chapter 2 for further details.
10. P.K Sivanandan, *Op. Cit*.

11. For details refer Chapter 6.

12. AHADS, 2008, *Op. Cit*.

13. Ibid.

14. Rakesh Saxena, et.al., 2006, *Op. Cit.*

CHAPTER - 4
SUSTAINABLE LIVELIHOOD SECURITY MODELS: CASE OF AHADS

Livelihood "comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation."[1] Household Livelihood Security has been defined as adequate and sustainable access to income and resources to meet basic needs (including adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration).[2] In its simplest form, livelihood security is the ability of a household to meet its basic needs (or realize its basic rights). These needs include adequate food, health, shelter, minimal levels of income, basic education and community participation. If any of these basic needs is not met, it is considered those households are living in absolute poverty[3]. However, simply satisfying one's basic needs are not adequate to ensure that people can rise above and stay above absolute poverty.

The present Chapter is an attempt to frame a theoretical modeling of the livelihood security approach of the AHADS. It will provide necessary background for the literature on socio-economic implications of AHADS, which we will discuss in detail in the Fifth Chapter.

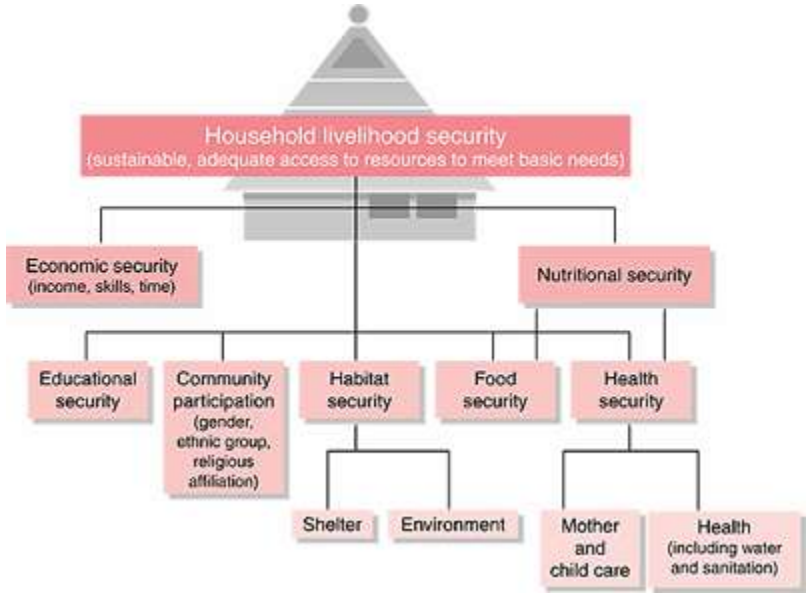
Livelihood Security

In the past several years, much progress has been made in understanding the processes that lead to food-insecure situations for households[4]. It became clear that adequate food availability at the national level did not automatically translate into food security at the individual and household levels. Researchers and development practitioners realized that food insecurity occurred in situations where food was available but not accessible because of erosion to people's entitlement to food[5]. "Entitlement"

refers to the set of income and resource bundles (e.g. assets, commodities) over which households can establish control and secure their livelihoods[6].

Worsening food insecurity came to be viewed as an evolving process in which the victims were not passive to its effects[7]. By the late 1980s, donor organizations, local governments and non-governmental organizations (NGOs) had begun to incorporate more extensive socio-economic information in their diagnoses of food insecurity.

Figure: 4.1 Components of Household Livelihood Security



The household food security approach that evolved in the late 1980s emphasized both the availability of food and stable access to it; food availability at the national and regional levels and stable and sustainable access at the local level were both considered essential to household food security (See, Figure: 4.1 for assessing the basic components of household livelihood security). Interest was centered on understanding food systems, production systems and other factors that influence the composition of the food supply and a household's access to that supply over time. What was not clear was how nutritional outcomes were factored into food security deliberations.

Studies on the causes of malnutrition demonstrated that food is only one factor in the malnutrition equation, and that in addition to dietary intake and diversity, health and

disease and maternal and child care are also important determinants[8]. Household food security is a necessary but not sufficient condition for nutritional security. Researchers identified two main processes that have a bearing on nutritional security. The first involves the household's access to resources for food. This is the path from production or income to food. The second process involves translating the food obtained into satisfactory nutritional levels[9]. A host of health, environmental, cultural and behavioural factors determines the nutritional benefits of the food consumed. This is the path from food to nutrition[10].

Nutritional security demonstrated that growth faltering is not necessarily directly related to failure in household food security. It shifted the emphasis away from simple assumptions concerned with households' access to food, the resource base and food systems by demonstrating the influence of health and disease, caring capacity, environmental sanitation and the quality and composition of dietary intake on nutritional outcomes.

Researches carried out in the late 1980s and early 1990s indicated that the focus on food and nutritional security as they were currently conceived needed to be broadened. It was found that food security is but one subset of objectives of poor households; food is only one of a whole range of factors that determine why the poor take decisions and spread risk, and how they finely balance competing interests in order to subsist in the short and longer term[11]. People may choose to go hungry to preserve their assets and future livelihoods. It is misleading to treat food security as a fundamental need, independent of wider livelihood considerations.

Thus, the evolution of the concepts and issues related to household food and nutritional security led to the development of the concept of household livelihood security. The household livelihood security model allows for a broader and more comprehensive understanding of the relationships among the political economy of poverty, malnutrition and the dynamic and complex strategies that the poor use to negotiate survival. The model places particular emphasis on household actions, perceptions and choices. Food is understood to be only one of the priorities that people pursue. People are constantly required to balance food procurement against the satisfaction of other basic material and non-material needs.

AHADS' Livelihood Security Approach

The important elements of the AHADS' Model of Eco-restoration and Sustainable livelihood include the following.

i. Watershed as a unit of planning: As the main objective of AHADS is eco-restoration, the unit identified for planning and implementation of the Project activities has been watershed. There are 15 main watersheds and 146 micro-watersheds in the Project area. The main watersheds have been identified as Development Units.

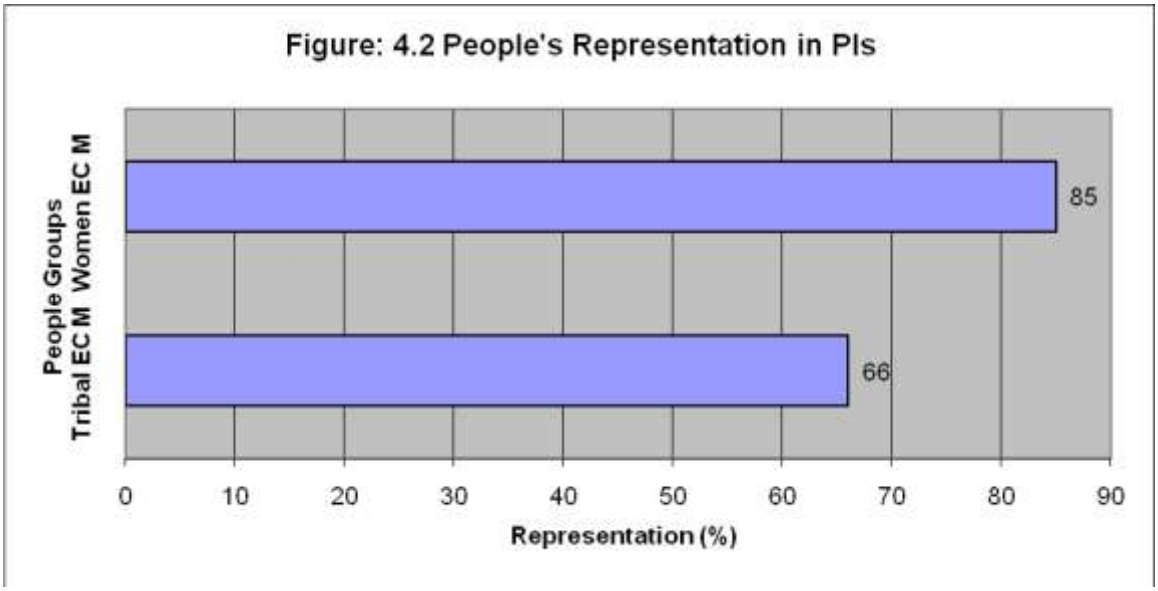
ii. Implementation through People's Institutions: AHADS formed various organizations of local people to plan and implement project activities in a participatory manner. Accordingly 93 User Associations (UAs), 166 Ooru Vikasana Samthis (OVS), 54 Joint Forest Management Committees (JFMCs), 111 Thaikula Sangams (TKSs), and 219 Income Generating Activity Groups are formed.

iii. Proper representation of women and tribal people in People's Institutions: In order to ensure proper representation of women and weaker sections including tribal communities in various PIs, it was made mandatory that all the PIs should have proper representation of all sections of the community. Regarding UAs, among the 9 member Executive Committee (EC) members at least 4 should be women and 4 tribals. For OVSs, among the 13 member tribal EC members, at least 6 should be women. Among the nine EC members of JFMCs at least 3 should be women. The TKSs are governed by 12 member women's ECs. IGAGs are lead by 12-15 members ECs. The details of People's representation in Various PIs are as given in Table: 4.1 and Figure: 4.3.

Table: 4.1 People's Representation in PIs

Particulars		PI/ Members
i.	Total People's Institutions	644
ii.	EC Members in PIs	7163
iii.	Women Executive Members	4771 (66%)
iv.	Tribal Executive Members	6088 (85%)

Source: AHADS, Status Report, 2008



iv. Employment Generation for local people: AHADS employed local people in different activities taken up under the Project. Shortage of labour has hindered different activities like nursery rising and plantation as well as THDP construction works, especially when the operations coincide with the farm activities during the Monsoon seasons. This strategy has slowed down the pace of implementation but has increased the availability of employment and wage rates to the local people[12]. As of 2008 figures, the Project has generated more than 4.38 million man days of employment[13]. These opportunities, in an area known for poverty and unemployment, have favorably influenced the socio-economic progress of Attappady. The widespread tendency of the people of Attappady, mainly the tribal communities, to migrate to Kerala and Tamil Nadu plains in search of employment has come down considerably since the advent of the project implementation.

v. Income Generation: Simultaneously with employment generation in eco-restoration and hamlets development activities, AHADS has also been promoting self employment to generate income for the local people, especially tribals. This is done largely through formation of Self Help Groups (SHGs). This strategy increased the involvement and income of local people,

particularly the landless, women and tribal people. Details of income generating activities are given in Table: 4.2.

Table: 4.2 Income Generating Activities Implemented by AHADS: Summary

Particulars		Details
i.	No. of IGAGs	219
ii.	Bank linked Groups	35
iii.	Groups into micro-enterprises	128
iv.	Total membership	2875
v.	Groups savings worth (Rs.)	16.92 Lakhs
vi.	Total Internal loan (Rs.)	8.26 Lakhs
vii.	Total external loan (Rs.)	2.15 Lakhs
viii.	No. of activities	40

Source: AHADS, *Status Report, 2008*.

vi. Multi-disciplinary approach: The initial strategy adopted for project implementation was to take up different Development Units (DUs) one by one or in small groups, which has reduced the overall pace of implementation. This strategy was therefore changed to simultaneous implementation in all DUs with one multi-disciplinary team for each DU, which has increased the over all pace of project implementation.

vii. Total Hamlet Development: This progarmme aims to address total hamlet development plan for tribal areas, which envisages comprehensive development by incorporating the social, cultural and individual needs through participatory approaches. Housing and landscaping, accessibility, drinking water supply, environmental hygiene and sanitation, sustainable farming systems and livelihood generation are the major components of the programme.

Relationships among various Segments and AHADS

Among the various stakeholders of AHADS there are different rates of relationships at different interfaces. As shown in Figure: 4.4 we can identify six stakeholders and among them we can identify five various relationships[14].

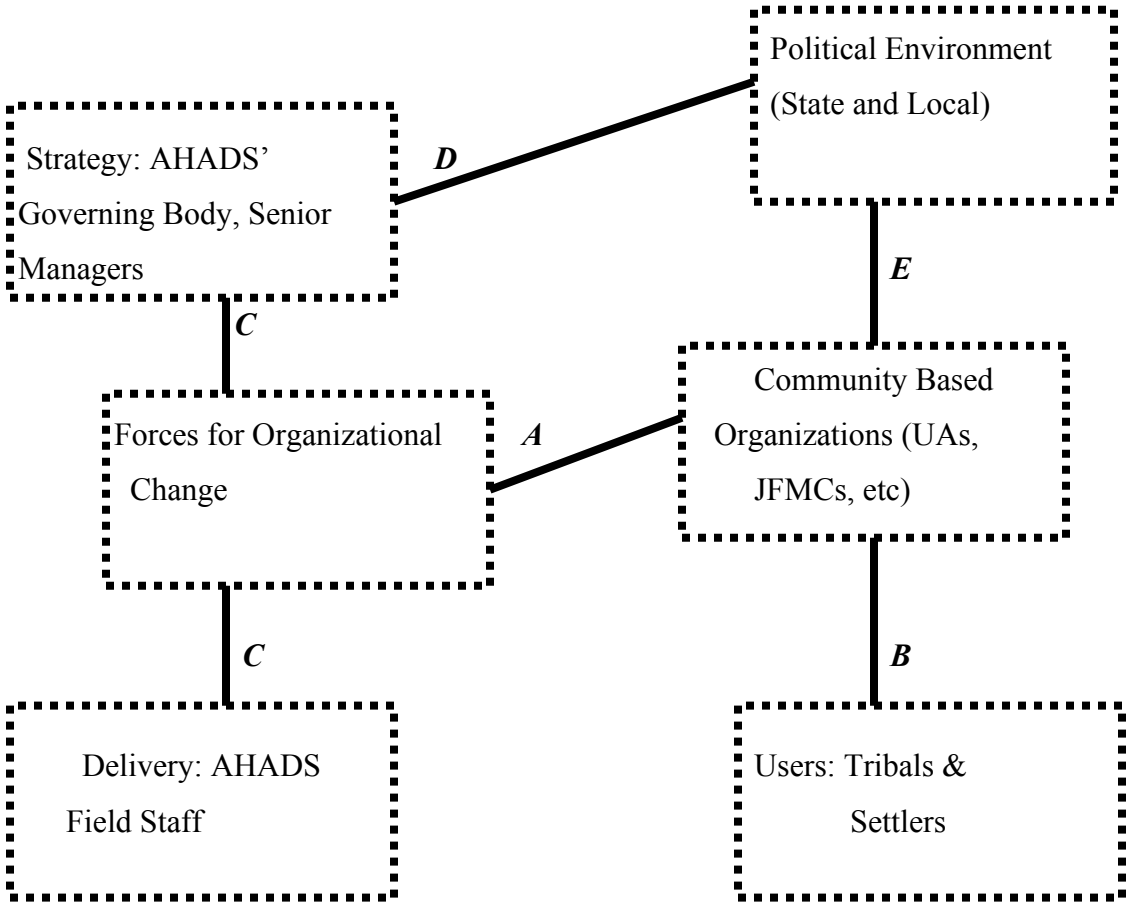
i. Relationship: A (Between Field Staff and CBOs): Importance given to technical component in planning, has led to lack of attention to importance of livelihood enhancement. Ambiguity in benefit-sharing from forests, did not provide sufficient incentive for involvement of local people in the initial phase of the Project, in particular in the planning process.

ii. Relationship: B (Between UAs and JFMCs): Poor quality processe led to poor group formation (tribals and settlers) and inequitable outcomes. Initial lack of identification of forest interest groups led to their subsequent exclusion.

iii. Relationship: C (Between AHADS Management and Field Staff): In order to address this relationship the project explored new styles of interaction between management and field staff, which is based on the principles of partnership, separation of planning from funding, and the need for bottom-up client based planning structured within strategic frameworks. Shifts were made in management away from command and control to an environment which supported mentoring of field staff and responsiveness to bottom-up planning based on analysis of what the beneficiaries wanted and could support. In the early stages poor understanding, skills development, and support from management led field staff to withhold on process and deliver the expected product.

iv. Relationship: D (Between Political Environment and AHADS): The relationship between AHADS and the political environment is a key element for pressure for change within the organization. It sets out the enabling environment in which change can be fostered. Single sector focus is not itself a ‘bad thing’ as far as it is clear to the beneficiaries, from the outset, that the processes being supported by the AHADS will deliver only on forestry activities that support secure livelihoods; it is clear that the AHADS can deliver only certain elements of an empowerment process.

Figure: 4.3 Relationships between and within AHADS, Service Users and the Political Environment



v. Relationship E: (Between PIs and Political Environment): Feedback mechanism to AHADS are essential; however, it is clear to have independent forums in which members of PIs can meet with others, share experiences, clarify problems and put forward rigorous proposals to the government agency.

The AHADS' livelihood security model can be briefed as in Figure: 4.5.

From internationally recognized Livelihood Security Models, we can extract eight livelihood outcomes, which are contextualized by natural, institutional, socio-economic, cultural and demographic factors. The livelihood security outcomes include security of food, nutrition, health, water, shelter, education, community participation and personal

safety. For the sustainability of the livelihood security the UN proposed a three-pronged approach, including livelihood promotion (development-oriented), livelihood protection (rehabilitation-mitigation oriented programming), and livelihood provisioning (relief-oriented programmes).

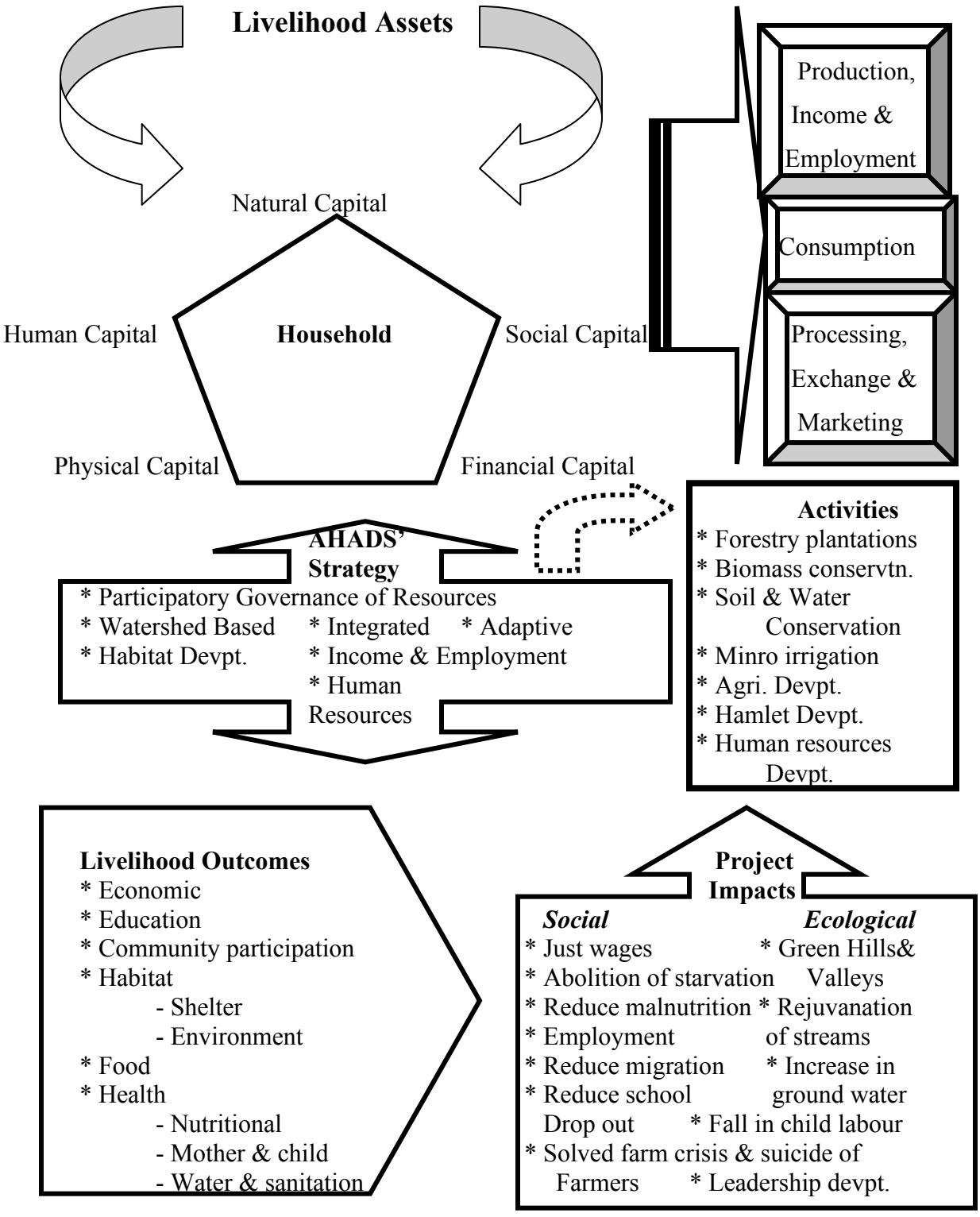
Regarding the livelihood promotion, soil and water conservation measures, creation of alternative income generating activities and common property management including forest conservation through community participation are the features of AHADS Model. However, meso-level, which are part of promotion type interventions, including enhancement of food availability and lowering of food prices are not part of the AHADS' strategy, except local access to income. But the preventive measures (as part of livelihood promotion) that improve the health and sanitation conditions are included under the THDP.

Livelihood protection measures are all inclusive under the AHADS package. These measures entail timely food and income transfers which can reduce long-term vulnerability resulting from the forced selling of productive assets to meet immediate food and other needs. AHADS' protection type interventions included infrastructure improvements, soil and water conservation measures and the THDP itself. Recovering measures such as infrastructure repair and rehabilitation, and afforestation including agro-forestry, are all part of the AHADS' package. These interventions are implemented by the community through the PIs created.

Livelihood provisioning under the AHADS' package was much weaker than the other segments. Targeted food and health relief is critical and should be combined with production intervention. Community focused interventions are necessary for chronically vulnerable populations (eg. Mother and child health programmes) to allow for the provisioning activities to be taken over by the community on a sustainable manner.

Sustainable livelihood, enriched environment, improved quality of life and human values, which are all included under the AHADS package. AHADS has identified hamlet as a unit of development in place of family. Improvements in quality of life through various development activities including health, literacy and moral development (activities of TKSs) are all significant steps in the right direction towards sustainable livelihood. Eco-restoration package needs special mention in this regard.

Figure: 4.4 AHADS' Livelihood Security Model



While promoting various development programs, the primary goal was to help the targeted families to come out of poverty, which assumes livelihood security. But, generation of substantial incomes through multi-disciplinary programmes was too weak under the AHADS' package. Women and tribal empowerment and participation is an important land mark of the AHADS' model including environmental literacy initiatives. These are critical for the sustainable livelihood of the rural poor.

Any development program without research back up is outdated; in the case of AHADS model training of field functionaries and farmers is indicative of effective transferring of technologies as well as human resources development.

One of the basic requisites for the sustainable livelihood approach is the formation of PIs to ensure transparency and public accountability. As regards AHADS, the five types[15] of PIs created has helped to a great extent in motivating the members of the community, particularly the backward and shy members (especially women) to sustain their interest and take active involvement in various development initiatives. The fundamental weakness of AHADS' livelihood security model is its projects inability to sustain living standards of rural poor once the Government funding and the institutional set up are closed.

The very premise of AHADS is watershed based eco-restoration. Various activities under these packages have immense potential to provide employment opportunities even to the landless, small land holders and women, while conserving environment and bio-diversity.

End Notes

1. Chambers and Conway, 1992, *Sustainable rural livelihoods: practical concepts for the 21st century.* IDS Discussion Paper No. 296. Brighton, UK, Institute of Development Studies.
2. Frankenberger, 1996, Measuring household livelihood security: an approach for reducing absolute poverty. *Food Forum,* No. 34. Washington, DC, USA.
3. *Ibid.*.

4. In the 1970s food security was mostly considered in terms of national and global food supplies. The food crisis in Africa in the early 1970s stimulated major concern on the part of the international donor community regarding supply shortfalls created by production failures caused by drought and desert encroachment (Davies, Buchanan-Smith and Lambert, 1991). This primary focus on lack of food supplies as the major cause of food insecurity was given credence at the 1974 World Food Conference. The limitations of the food supply focus came to light during the food crisis that again plagued Africa in the mid-1980s.
5. Borton and Shoham, 1991, *Mapping vulnerability to food insecurity: tentative guidelines for WFP offices*. Study commissioned by the World Food Programme. London, UK, Relief and Development Institute. (Mimeo).
6. Sen's (1981) theory on food entitlement had a considerable influence on this change in thinking, representing a paradigm shift in the way that famines were conceptualized. Households derive food entitlements from their own production, income, gathering of wild foods, community support (claims), assets, migration, etc. Thus a number of socio-economic variables have an influence on a household's access to food.
7. Social anthropologists observed that vulnerable populations exhibited a sequence of responses to economic stress, giving recognition to the importance of behavioural responses and coping mechanisms in food crises (Frankenberger, 1992).
8. UNICEF, 1990, *Strategy for improved nutrition of children and women in developing countries*. New York, NY, USA, UNICEF.
9. World Bank, 1989, *Mozambique food security study*. Washington, DC, USA.
10. International Fund for Agricultural Development (IFAD). 1993. *Rural poverty alleviation and nutrition: IFAD's evolving experiences.* Technical Paper, Technical Advisory Division, Project Management Department. Rome.

11. Maxwell and Smith, 1992, Household food security: a conceptual review. *In* S. Maxwell and T. Frankenberger, eds. *Household food security: concepts, indicators, and measurements: a technical review*. New York, NY, USA and Rome, UNICEF and IFAD.
12. The local farmers, particularly the settlers, complain about the wage rates that have increased due to the project. For more information on employment generation and wage rates, see Chapter: 6.
13. AHADS, 2008, *Status Report 2008*, Agali, Palakkad.
14. Rakesh Saxena, et.al., 2006, *Mid Term Evaluation of AWCECP, Kerala*, Institute of Rural Management, Anand.
15. See Chapter-6 for more details.

CHAPTER - 5

SOCIO - ECONOMIC IMPACT OF AHADS IN ATTAPPADY: AN ANALYSIS OF HOUSEHOLD LIVELIHOODS

Introduction

The objective of this Chapter is to analyze and describe how the Household Livelihood Security framework has been operationalized by AHADS in Attappady through the eco-restoration project. The Chapter attempts to show how livelihood strategies and tools have been taken into account in diagnosis and implementation, which are reflected in the socio-economic outcomes. Emphasis will be given to how participatory approaches have been integral to this process. The Chapter will document the economic gains to the local communities especially the tribal communities from the development activities of AHADS.

Households have access to both tangible and intangible assets that allow them to meet their needs. Natural Capital consists of natural resource stocks from which resource flows useful for livelihoods are derived (e.g. land, water, wildlife, biodiversity, and environmental resources). Social Capital is the quantity and quality of social resources (e.g. networks, membership in groups, social relations, and access to wider institutions in society) upon which people draw in pursuit of livelihoods and as safety net mechanisms to meet shortfalls in consumption needs[1]. Human Capital consists of the skills, knowledge, ability to labor and good health, which are important to the pursuit of livelihood strategies. Economic Capital is the productive resources and stores (e.g. savings, credit, remittances, pensions, etc.), basic infrastructure (e.g. transport, shelter, energy, communications, and water systems), production equipment, and other means that enable people to pursue their livelihoods.

In the analysis of these resources, it is important to take into account the combinations necessary for sustainable livelihoods, the trade-offs that exist between resources, the sequences that may exist between them (i.e. which resources are prerequisite to others), and the long-term trends in their use[2] .

Demographic Profile

According to the 2001 Census, total population of Attappady was 66,171, which includes 27,121 (41%) Scheduled Tribes and 3024 (4%) Scheduled Castes (See, Tables: 5.1, 5.2 and Figure: 5.1). Even though, Pudur Panchayat occupies 59% of the geographical area of Attappady, it accommodates only 19% of the population due to geographical specialty and land uses including forest resulting in low density of population. On the other hand, occupying only 20% of the geographical area of Attappady block, Agali Panchayat accommodates 53% of the population. The Scheduled Tribes belong to the Dravidian clans of Irula, Muduga and Kurumba. Around 84% of the tribes in Attappady belong to Irula community followed by Muduga and Kurumba (See, Table: 5.3 and Figure: 5.2). Out of the total population of 66,171, 55% belongs to general category. The tribals constituted majority of the population up to 1961; but are now in minority, for settlers from outside outnumber them[3].

Table: 5.1 Panchayat wise Details of Demographic Particulars in Attappady, 2001

Panchayat	Area (Hect.)	No. of Households	Population		
			Male	Female	Total
i. Pudur GP	41347	3280	6417	6145	12562
ii. Sholayur GP	15076	4797	9254	9134	18388
iii. Agali GP	13900	8238	17623	17598	35221
Attappady B	70323	16315	33294	32877	66171

Source: Census Reports, 2001

The tribes of Attappady have a rich cultural heritage consisting of their beliefs, practices, songs, dances and indigenous wisdom. They have a traditional system to maintain the social order of each hamlet in harmony with natural resources and society. The ‘Oorumoopan’ is the chief of the Society; ‘Kuruthalai’, a ministerial position, ‘Bhandari’, the treasurer and ‘Mannukkaran’, who determines the sowing season, management of crops, handling indigenous medicine etc. occupy next position in the

social hierarchy[4]. Although significantly diluted, the traditional social hierarchies are still maintained in most of the tribal settlements. In order to integrate traditional systems with the modern democratic arrangements of the People's Institutions in the eco-restoration project, the traditional heads are made members of the Executive Committees of the PIs.

Table: 5.2 Population Details of Attappady, 2001

Category	Population	%
1. Scheduled Tribes	27121	41
2. Scheduled caste	3024	4
3. General	36026	55
4. Total	66171	100

Source: Census Reports, 2001

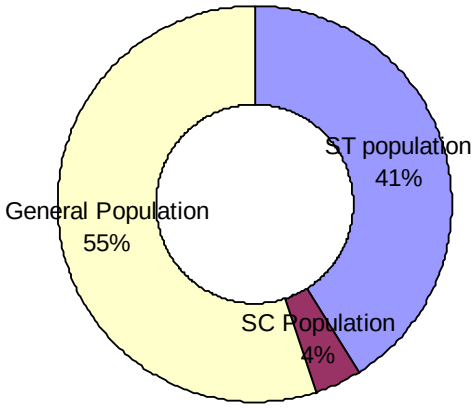
Kurumba

The Kurumba tribes are considered as the earliest tribal inhabitants of Attappady. When the Baduga started colonizing the Nilgiris, these people moved down to the Attappady valley. They are the smallest among the three tribal groups of Attappady, accounting only 6% of the tribal population (Table: 5.3 and Figure: 5.2). After an initial period of nomadic life, they must have taken up shifting cultivation; their main occupations being hunting and gathering[5]. Once their hamlets were distributed in the valleys of river Bhavani and its tributary Varagar; there are now only 19 hamlets spreading across the catchment area of Bhavani River. However, all these people have their settlements inside the forest, and until recently they had hardly any contact with the outside world.

The Kurumba have the same social hierarchies that the other groups observe, with Moopan as the head of a settlement. There are reports of a few inter-tribe relations between Kurumba and Muduga, as some of the Kurumba have married among Muduga tribes[6]. They occupy the headwaters of the major streams in the upper reaches of the mountains, and have been shifting cultivators. They practice dry-land farming in the lands cleared in the forest areas. In addition, they also depend upon the collection of non-

timber forest produces for generating income. Due to their intricate knowledge of the forest terrain, they have been misled by vested interest groups and have been used to cultivate Ganja (cannabis) inside the forest areas. The Forest and Excise departments have constantly raided the areas and such situations lead to social unrest. Adopting the approach of persuasion and intervening in their social development, they are being slowly weaned away from such practices.

Figure: 5.1 Population Details of Attappady



Muduga

Muduga are the second largest tribal community in Attappady, covering 24 hamlets. Most of the Muduga hamlets are settled in the Western Attapady, mostly in the proximity of Bhavani river. It is believed that the Muduga were the original inhabitants of Coimbatore plains and later moved westward due to persecution and exploitation by more dominant communities. They are dry-land farmers, sowing crops such as ragi, thuvara, chama etc. They have more contact with the migrated settlers from the plains of Tamilnadu and Kerala. Literacy rate of Muduga is relatively higher among the tribals. The growing contact between Muduga and settlers has influenced their culture.

Table: 5.3 Distributions of Tribal Communities in Attappady

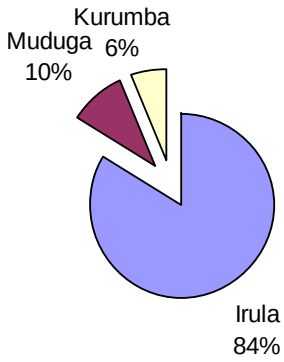
Hamlets	Irula	Muduga	Kurumba	Total
%	84	10	6	100

Source: AHADS, 2008

Irula

Irula are the numerically dominant and relatively advanced among the three tribal groups in Attappady. They probably occupied this area after the Kurumba and Muduga[7]. They mostly inhabit the eastern half of the valley and are found residing in 144 settlements, distributed over all the three Panchayats of Attappady. They once were shifting cultivators, but due to land alienation over decades, they were forced to practice settled agriculture and plough cultivation. At present, those who possess small plots of land near their hamlets perform dry land agriculture, mainly indigenous grains and cotton. However their major source of income is wage labour.

Figure: 5.2 Tribal Population of Attappady



Non-tribal

Non-tribes residing near the Coimbatore border must have established early contacts with the Irula in Attappady and mainly the Tamil Goundan began to migrate to the eastern side in the 1920s[8]. Although they came mainly for agriculture, at first they did not settle down in the area. Instead, they entrusted the agriculture jobs to the Irula and only collected the produce. Towards the late thirties, however, the Goundan began to settle in Attappady and cleared forests. The Kururmba and Muduga who occupied the interior areas were not affected significantly by these early settlements.

However, from the 1940s to 1980s, a large number of people from the plains of Kerala moved into the Attappady valley, mainly to exploit forest wealth as well as to use the cultivable lands. It was only after an all-weather road from Mannarkkad to Malleswarankovil was constructed in 1946 and later extended to Coimbatore, that the pattern of migration to the area changed. The pace of migration into the area increased from about 800 persons per year from 1951-1961 to over 2,000 per year during 1961-1971[9].

The migrants, who settled down in the drier zones in the three village- Agali, Pudur and Sholayur, were from the neighboring areas of Tamil Nadu. The migrants of Kerala origin who came mostly from the plains settled in the high rainfall areas such as Karara, Chittur and Sholayur. The cultivation practices of the migrant groups determined the choice of localities for settlement. Of the Malayali migrants, more than 50 percent were from central Travancore and around 30 percent from the plains of Palakkad. They adopted the crops and cultivation practices with which they were familiar. Such an adoption of ecologically incompatible cropping systems, along with massive forest clearance, has been the major cause of degradation of the ecology of Attappady.

Sex Ratio

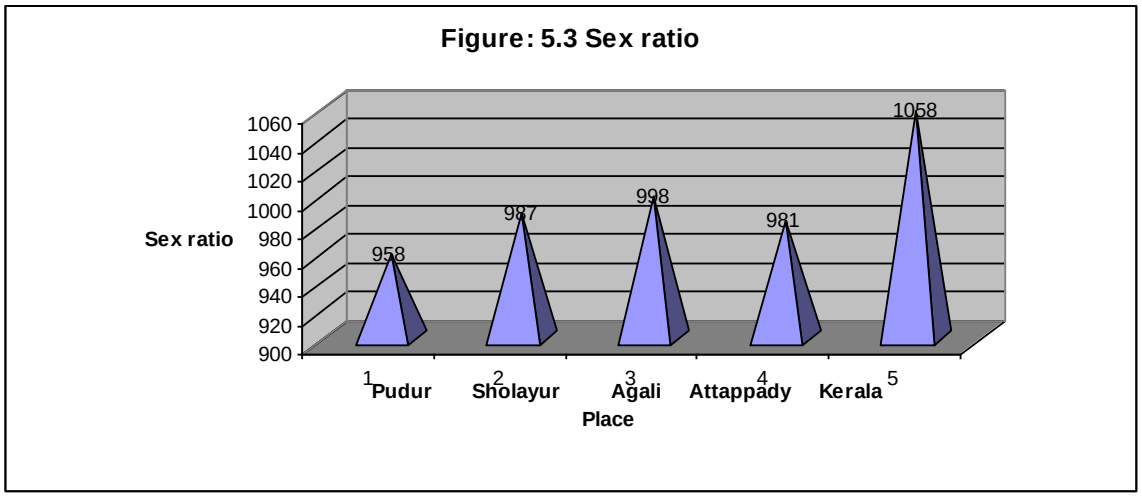
Gender dimension of demographic transition is assessed through the sex ratio; in Attappady, sex ratio is comparatively lesser than that of the State average. As of 2001 Census the ratio was 981 in Attappady, where as it was 1058 for the State (See, Table: 5.4 and Figure: 5.3).

Table: 5.4 Sex Ratio in Attappady, 2001

Panchayat	Sex Ratio*
i. Pudur GP	958
ii. Sholayur GP	987
iii. Agali GP	998
Attappady B	981

Source: Census Reports, 2001

* Females per thousand males



In the present Survey it was found that the sex ratio among the tribal communities was much worse; 923 females per 1000 males (Table: 5.5). Among the tribal communities the ratio is as low as 818 for Kurumba community, however, the Muduga's have a better ratio of 1083, even better than the State average.

Table: 5.5 Sex Composition of Households (%)

Sex	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Male	52	48	55	52	42	47
Female	48	52	45	48	58	53

Source: Sample Survey (December 2009)

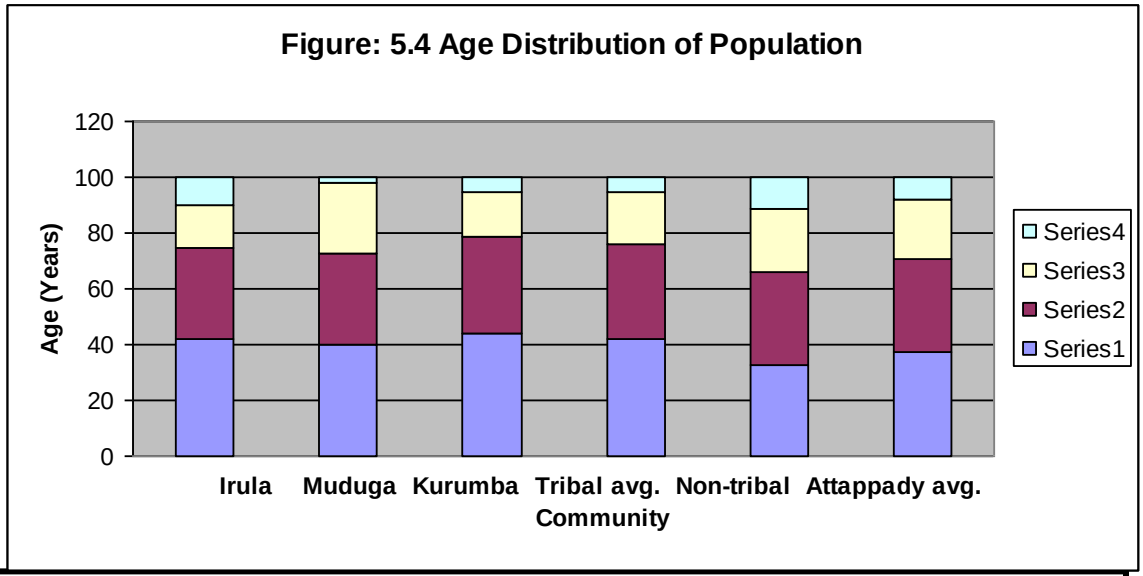
Age Distribution

One of the demographic indicators that shows the social progress is the age distribution of population, which states that as the demographic transition takes place along with socio-economic development the proportion of younger population will declines and that of the old aged will increase. In the sample survey it was found that the working age group (from 18-55years) contributed around 55% of the total population with marginal variation between tribals vis-à-vis non-tribals (Table: 5.6 and Figure 5.4). As of Census figures 2001, children aged 6 and below accounts only 13% of the Attappady population (Table: 5.7).

Table: 5.6 Age Distribution of Households (%)

Age (Years)	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
< 18	42	40	44	42	33	37.5
18-35	33	33	35	34	33	33.5
35-55	15	25	16	19	23	21.0
>55	10	2	5	5	11	8.0

Source: Sample Survey (December 2009)



Series1: <18 years/Series 2: 18-35 years/Series 3: 35-55 years/ Series 4: > 55years

Table: 5.7 Distribution of Younger Population in Attappady, 2001

Panchayat	Younger Population*
i. Pudur GP	1781 (14%)
ii. Sholayur GP	2283 (12%)
iii. Agali GP	4534 (13%)
Attappady B	8598 (13%)

Source: Census Reports, 2001
* Population below 6 years of age
Note: Figures in parenthesis shows the percentage of total population.

Family Size

To a greater extent family size will declines as the demographic transition takes place in juxtaposition to socio-economic development. In Attappady, around three quarters of the families have size of 3 to 5 members; among the tribal communities especially Kurumba 27% have family size above 5 members (Table: 5.8).

Table: 5.8 Family Size of Communities (%)

Family Size (No. of Members)	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
< 3	22	17	5	15	10	12.5
3-5	64	66	68	66	80	73.0
> 5	14	17	27	19	10	14.5

Source: Sample Survey (December 2009)

Martial Status

Among the elderly population in Attappady, 81.5% are married (Table: 5.9). Widowed account for 13% among the tribal communities as against only 4% among non-tribals. Divorced/ separated account only 3% among the tribal communities with marginal variation between the tribes. Marriage at the early age is quite common among

the tribal communities in the area, which is exemplified by the lesser proportion of unmarried elderly population (8.5%).

Table: 5.9 Martial Status of Households (%)

Matrial Status	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Married	77	78	76	77	86	81.5
Unmarried*	3	8	10	7	10	8.5
Widowed	15	12	12	13	4	8.5
Divorced/ Separated	5	2	2	3	0	1.5

Source: Sample Survey (December 2009)
Note: Above 18 years for Women and 21 Years for Men.

Literacy Level

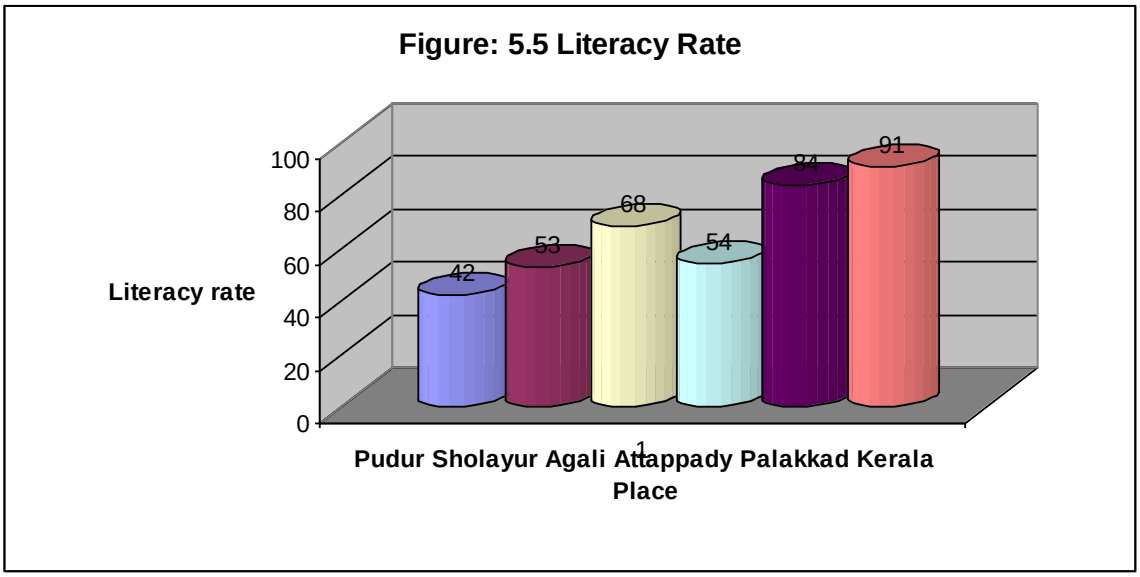
Among the states in India, Kerala is miles ahead of others in social indicators like literacy rate, higher enrolment of students, percentage of girls and SC/ ST students in schools and colleges, even in remotest areas such as Attappady[10]. Kerala's literacy rate which was only 47% in 1951 has almost doubled to 90.92% by 2001. However, in Attappady the literacy rate is only 54%, indicating the backwardness of the area, which is far behind the district average of 84% (Table: 5.10 and Figure: 5.5).

Table: 5.10 Literacy Rates in Attappady, 2001

Panchayat	Literacy Rate
i. Pudur GP	42
ii. Sholayur GP	53
iii. Agali GP	68
Attappady B	54
Palakkad	84.31
Kerala	90.92

Source: Census Reports, 2001

In Attappady block, Pudur Panchayat is the most backward in education front with a literacy rate of only 42%, which is comparable to that of the State in 1950s.



As per the sample survey, the literacy rate in Attappady is 65.5%, which is better than that of 2001. However, among the tribal communities literacy rate is only 49%, which is comparable to that of the State in 1950s (Table: 5.11 and Figure: 5.6).

Table: 5.11 Literacy Rate among Households (%)

Literate Family Members*	Tribal Average	Non-tribal	Attappady Average
	49	82	65.5

Source: Sample Survey (December 2009)

Note: * Population above 18 years of age

Educational status of households indicates that 19.5% did not have any formal education; the corresponding figure for the tribal communities was a staggering 28%. Another 57% of the tribal communities could not complete their 10th Grade in schools (Table: 5.12 and Figure: 5.7). Graduates, technically educated and professionals constitute a meager of 2% among the tribal community.

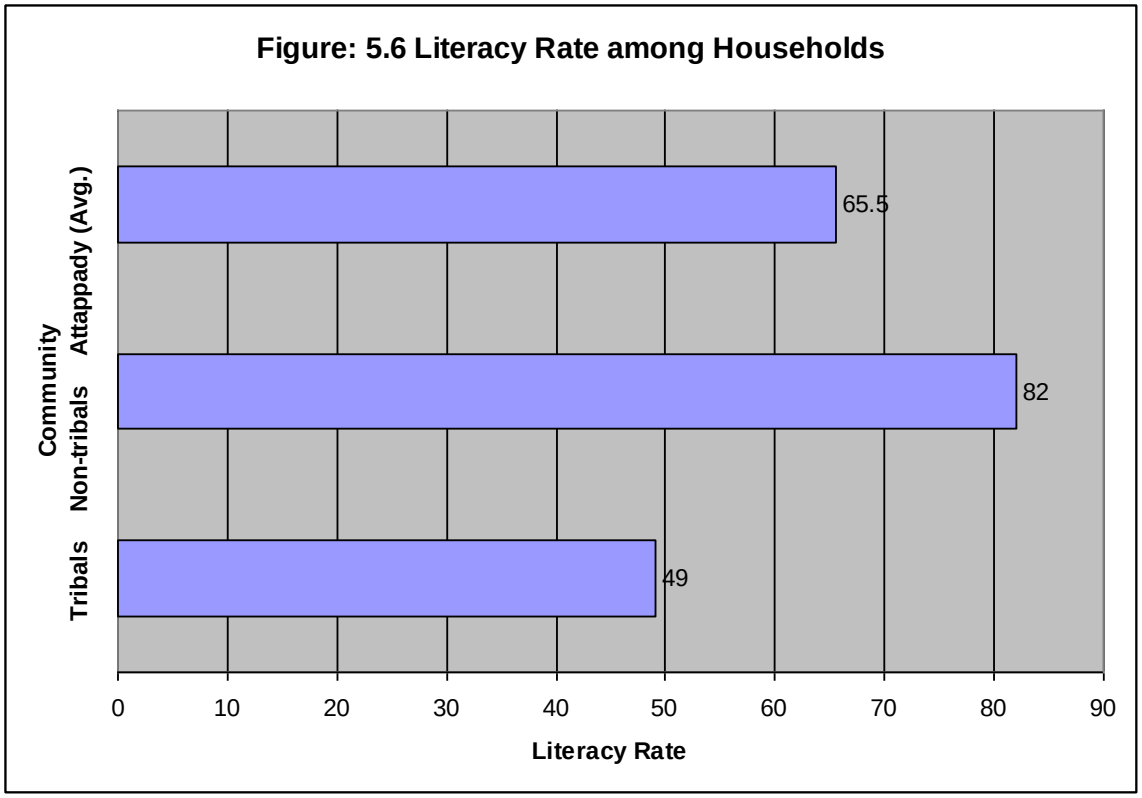
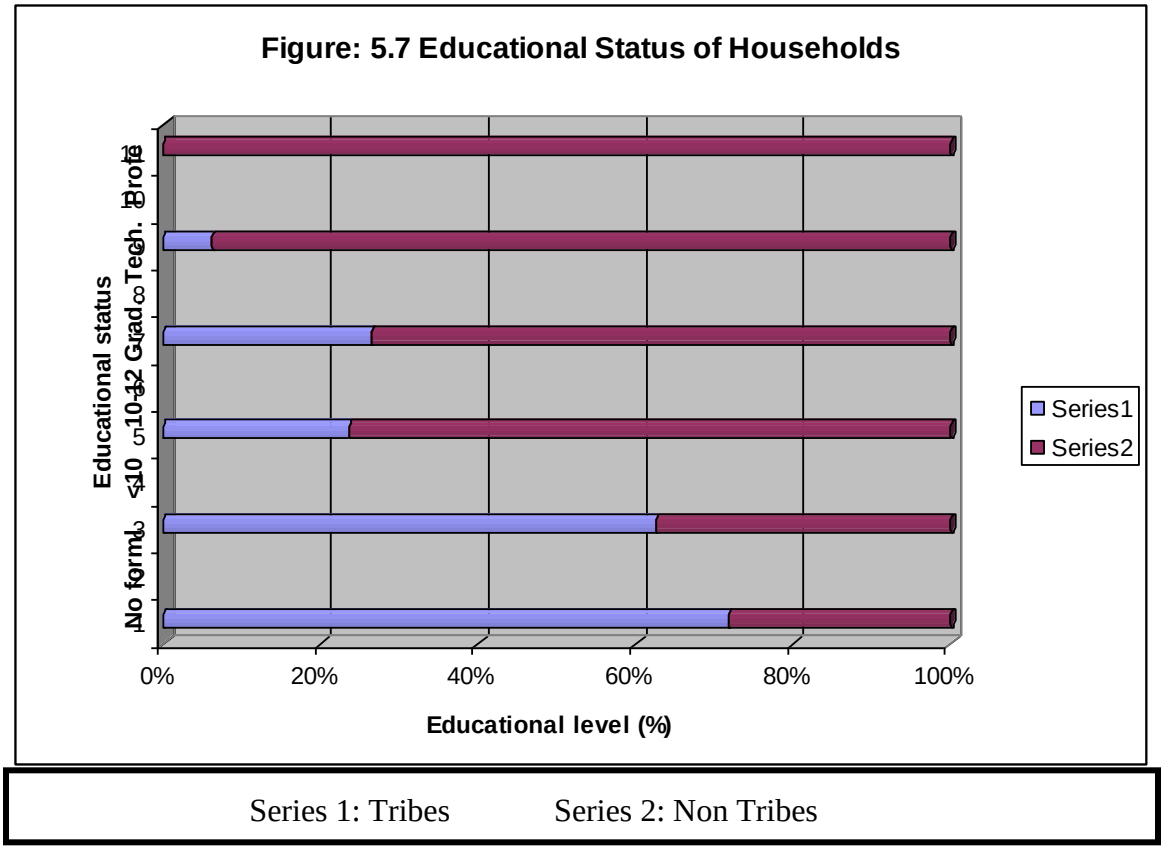


Table: 5.12 Educational Status of Households (%)

Educational Status	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
No formal education	33.5	24	25	28	11	19.5
< 10 Class	56	61	55	57	34	45.5
10-12 Class	7	13	20	13	42	27.0
Graduates	3	2	0	1.8	5	3.5
Technical	0.5	0	0	0.2	3	2.0
Professional/ PG	0	0	0	0	5	2.5

Source: Sample Survey (December 2009)



Series 1: Tribes Series 2: Non Tribes

Table: 5.13 News Paper Reading Habit among Households (%)

Households having access to News paper (%)	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
	6	3.5	0	3.2	40	21.6

Source: Sample Survey (December 2009)

One of the areas, where we can observe the reflection of literacy rate is the reading habit of the society, which in most cases is reflected through the news paper reading habit. In remote areas such as Attappady, availability of reading materials is one of the major indicators that hinder the reading habit. In the survey it was observed that only 21.6% of the households have access to news papers in Attappady, where as the figures for the tribal community was as low as 3.2 % (Table: 5.13).

School Education

There are 28 educational institutions in Attappady for schooling at various levels; which include 16 Lower Primary Schools, 5 Upper Primary Schools and remaining High Schools (Table: 5.14).

Table: 5.14 Details of Schools in Attappady, 2005

Type of Schools		Numbers
i.	Lower Primary School	16
ii.	Upper Primary School	5
iii.	High School	7

Source: Dept. of Economics and Statistics, 2006

As per the Sample survey, on an average 1.15 children are going to school per family in Attappady; the corresponding figures of the tribal households come to 1.3. The dropout rate of children from different schools of Attappady has come down when compared with the previous years. A survey conducted on 14 lower primary schools in the year 1999 – 2000 reported 174 dropouts[11]. However a survey in the educational year 2003-04 had reported only 120 dropouts. In the case of upper primary schools, the reported dropouts in the year 2003-04 from 6 schools were 65 against 107 in the year 1999-2000. In the case of high schools, there were 70 dropouts against 83 in the past. However, in the present Sample Survey it was found that the drop-out rate is 4.75 in Attappady, as against the state average of 0.83%[12]. Drop-out rate is as high as 18% among Kurumba community and for Muduga it is only 4.5% (Table: 5.15). The fall in school dropouts when compared to the previous years is interpreted to be attributed to the better socio-economic conditions emerging in the hamlets as a result of project implementation[13].

One of the major reasons for the school drop-out in Attappady is financial difficulty of the parents as evinced in the Survey. In some cases it will lead to Child labour. However, it was reported that Child labour has drastically come down during the project implementation period, which can be related to the decreasing school dropouts, as more and more children are being sent to the schools. Distance to the School was earlier

indicated as one of the reasons for children not going to school, especially girls. The survey indicates that the average distance to the school from the hamlets was about 8.58 KM with variations at different levels, ranging from LPS to Higher Secondary level (Table: 5.14). In the case of Kurumba community the distance was as high as 38 KM for Secondary and Higher Secondary schools from the hamlets.

Table: 5.15 Schooling Details of Children in Attappady (%)

Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
children going to school*	1.0	1.6	1.3	1.3	1.0	1.15
Children not going to school (%)+	8	4.5	16	9.5	0	4.75
Reasons for not going to school (%)#						
Financial difficulty	50	33	25	36	0	-
Health Problems	0	33	25	20	0	-
Other Reasons	50	34	50	44	0	-
Distance to the nearest school (KM)						
LPS	3.5	2.3	0.69	2.16	3	2.58
UPS	5.5	6.0	11	7.5	4	5.75
High School	4.5	14.5	38	19	4	11.5
Higher Secondary	4.5	14.5	38	19	10	14.5

Source: Sample Survey (December 2009)

Note: * Average number of children going to school per household
+ Percentage of children not going to school out of total children
# Weightage in percentage for the reasons behind the children not going to school.

Livelihood Security Outcomes

To determine whether AHADS was successful in pursuing their livelihood strategies, it is important to look at a number of outcome measures that capture need or well-being satisfaction. Nutritional status is one of the outcome indicators for overall livelihood security since it captures multiple dimensions such as access to food, healthcare and education. Other livelihood outcomes that are to be measured include sustained access to food, education, health, habitat, social network participation, physical

safety, environmental protection, as well as life skills capacities. Analysis of these outcomes should not only determine what needs are currently not being met, but also what trade-offs are there between needs. In addition, the analysis will help determine the synergistic relationships between these outcome measures.

In addition to these standardized measures, attempts are made to derive from the community the criteria they use for determining livelihood improvement. These measures are often location specific. Every effort is made to establish community-based monitoring systems to enable the community to track improvements themselves.

Impact of AHADS at Attappady

The eco-restoration project, through its concept, strategies and implementation activities, has brought about considerable ecological and socio – economic changes in Attappady. Since the programmes deal with holistic development of the region, there are tangible as well as intangible benefits from the project. It has to be recognized that the intangible benefits that relate to enhancing social capital of the marginalized people, such as the tribals, cannot be computed in monetary terms. Yet a large range of rejuvenation activities over the landscape and a desire to improve livelihoods are associated with the tangible benefits, accruing out of the effects of the project.

Employment and Income Status

The sample survey shows that 63% of the people are laborers and among the tribes it is as high as 81% without any social security benefits, most of them are employed in the informal sector. Community-wise employment status reveals that these figures are too high for the Kurumba community (86%). See Table: 5.16 for more details. Among women, house wives contribute 27% for non-tribals; however, it is interesting to see that the corresponding figure for the tribals was only 4%. The organized sector employment accounted for 14% in Attappady, where as the corresponding figures for the tribal community was only 9.5%.

Table: 5.16 Employment Status of Households (%)

Employment	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Labourers	72	84	86	81	45	63
Housewives	7	5	0	4	27	15.5
Animal husbandry	9	0	0	3	0	1.5
Public/ Private	7	8	14	9.5	19	14
Others	5	3	0	2.5	9	6

Source: Sample Survey (December 2009)

Households combine their livelihood resources within the limits of their context and utilize their institutional connections to pursue a number of different livelihood strategies. Strategies can include various types of production and income-generating activities (e.g. agricultural production, off-farm employment, formal sector employment, etc.) or some combination of the two. Small Scale Industries (SSIs) is one of the areas where we can see a combination of the two. As of 2005, there are 320 SSIs in Attappady, of which 66% are located in Agali Panchayat (Table: 5.17).

Table: 5.17 Small Scale Industries in Attappady, 2005

Panchayats	Number of SSIs
Sholayur	66 (21%)
Pudur	42 (13%)
Agali	212 (66%)
Attappady	320

Source: Dept. of Economics and Statistics, 2006, Panchayat Level Statistics
Note: The SSIs include agro-based, rubber, plastic, forest, animal husbandry, textile, chemical, engineering, mineral, building materials and others

The AHADS' project has so far generated more than 3.45 million man days of employment[14]. In the sample survey it was reported that the Project has generated on an average 5.2 man days of employment per week for men and 4.7 man days for women in the beneficiary hamlets (Table: 5.18). Average number of working hours ranged between

7.3 hours for men and 7.6 hours for women. Average daily wages for men was as high as Rs.158 for men and Rs.118 for women in the tribal hamlets. The corresponding figures for the non-tribal counterparts came to Rs.110 and Rs.100 respectively. These figures show that the AHADS' initiatives have helped the tribal communities to a greater extent in reducing their poverty and unemployment. These employment opportunities, in an area known for poverty and unemployment, have favorably influenced the socio-economy of Attappady. One of the areas where we can see the reflection is in the out-migration of people from Attappady. The widespread tendency of the people of Attappady, mainly the tribal communities, to migrate to Kerala and Tamilnadu plains in search of employment has come down considerably since the advent of the project implementation.

Table: 5.18 Employment Status of Households (%)

Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Average number of employed days per week						
Male	4.5	4.5	4.8	4.6	5.6	5.1
Female	4.1	3.9	4.1	4.0	5.3	4.7
Average number of Working Hours per day						
Male	7.8	8	8	7.9	6.7	7.3
Female	8	7.5	8	7.8	7.3	7.6
Average Daily Wages (Rs.)						
Male	163	174	136	158	110	134
Female	115	129	110	118	100	109
Female Wages as percentage of Male wages	71	74	81	75	91	81

Source: Sample Survey (December 2009)

When AHADS started project implementation, the daily wage rate prevailing in Attappady, especially in eastern Attappady, was as low as 30 to 50 rupees[15]. AHADS has established and ensured a just wage rate of 80 to120 rupees through the PIs; efforts are being made to enhance the daily wage rate to Rs. 125 for both men and women in tune with the wages provided under Employment Guarantee Programme of the Panchayaths. However, in practice at the grass root level, as given in Table: 5.18 and Figure: 5.8, there was gender gap in distribution of daily wages; female wages was only 81% of the male

wages. This gap was much higher among the tribal communities and is as high as 71% among the Irula community. But, there is really a great increase in the wages of laborers ranging from 40-75% in the hamlets after the initiation of the Project, which has directly translated into the livelihood outcomes through access to food and other basic needs.

Figure: 5.8 Gender dimension of wages

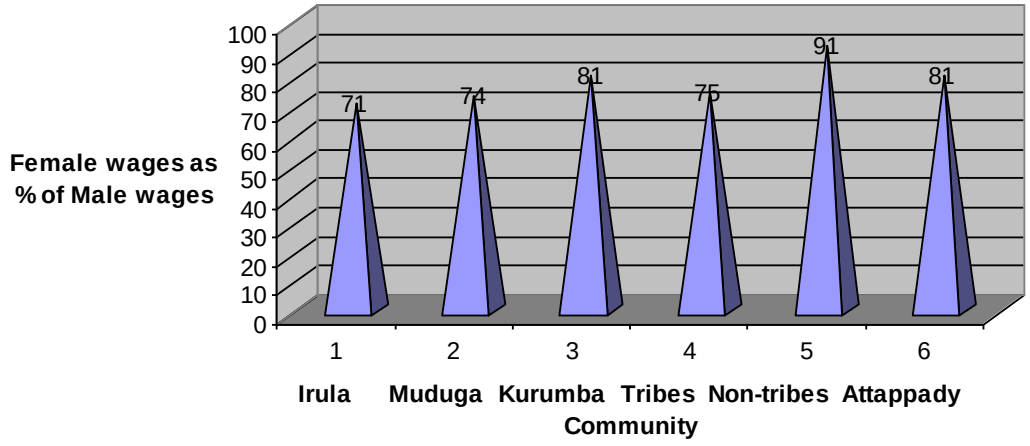


Table: 5.19 Annual Household Employment Generated by AHADS* (%)

Assistance	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
< 100 Days	20	39	4	21	0	11
100-200 Days	40	34	44	39	10	24
200-300 Days	4	8	40	17	45	31
> 300 Days	0	0	4	1	0	0.5
No employment	36	19	8	22	45	33.5

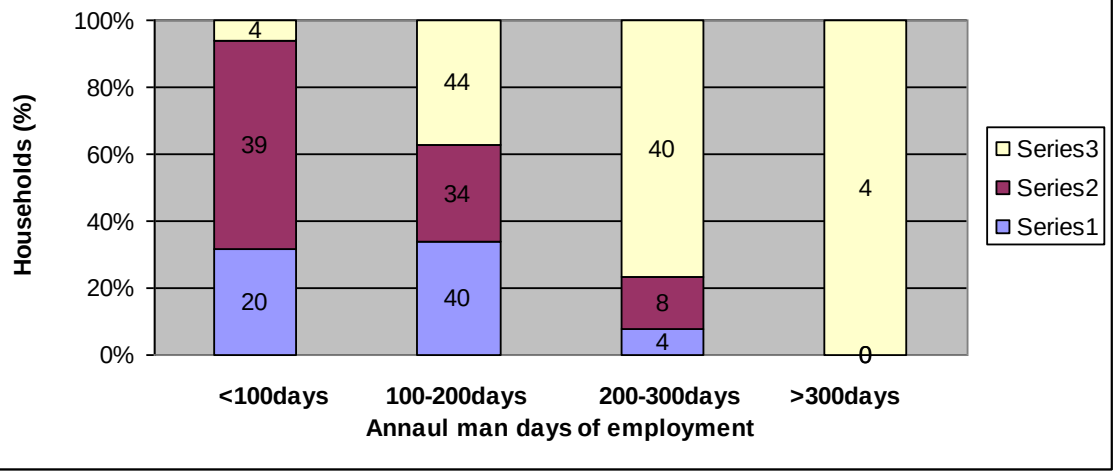
Source: Sample Survey (December 2009)

Note: Annual average employment generated within the last one year

The sample survey reveals that the Project has helped to a great extent in generating employment among the tribal communities. On an average 18% of the tribal communities got more than 200 man days of employment within the last one year. The

corresponding figure for the non-tribals was 45%. However, it was reported that 22% of the tribal households and 45% of the non-tribal households did not get any employment during the mentioned period from the Project (See, Table: 5.19). As shown in Figure: 5.9, Kurumba community got good representation under employment generation within the last one year.

Figure: 5.9 Employment Created by AHADS among Tribes



Series 1: Irula Series 2: Muduga Series 3: Kurumba

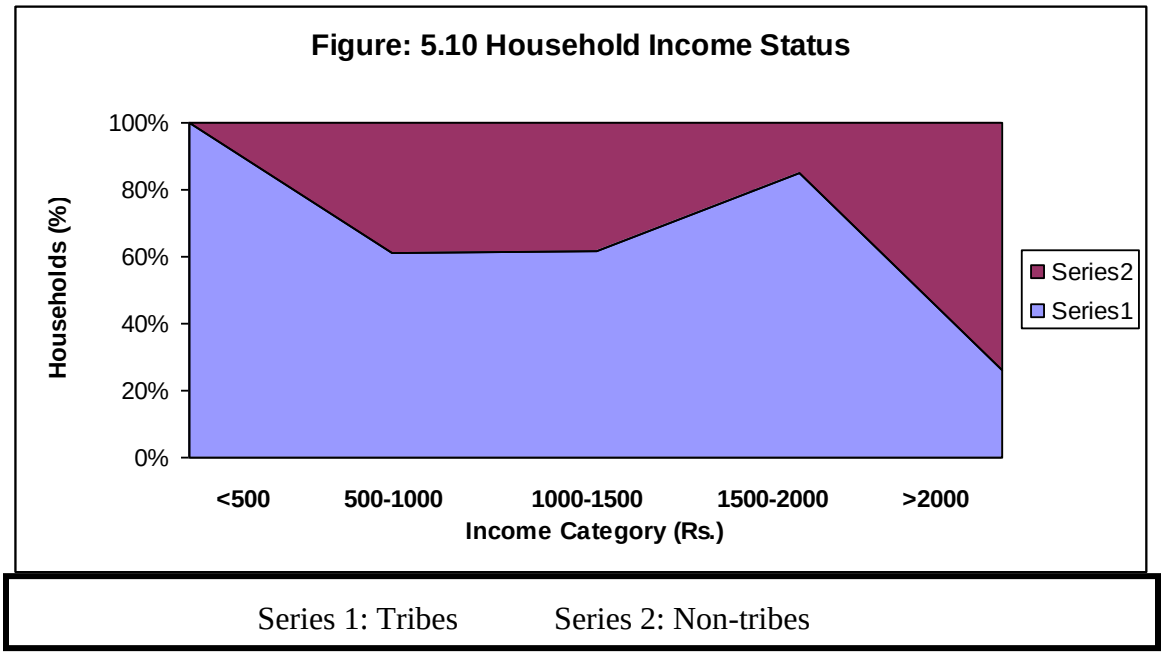
Income Status and Expenditure Pattern

As mentioned earlier, the livelihood security component of income generation is directly related to the strategy of employment creation at the local level. Around 35% of the tribal communities have monthly income lesser than Rs.1500, which translates into the poverty ratio at the hamlet level (Table: 5.20 and Figure: 5.10). The corresponding figure for the non-tribals was only 20% in Attappady. The income distribution as given in Figure: 5.10, shows the inequality in distribution of income biased in favor of non-tribals in Attapady. The household income can directly decipher into food security and other livelihood assets; inequality in the distribution will directly lead to insecurity of livelihood assets.

Table: 5.20 Monthly Income Status of Households (%)

Income Status (Rs.)	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
< 500	2	4	3	3	0	1.5
500 - 1000	9	8	16	11	7	14
1000-1500	19	21	24	21	13	17
1500-2000	49	27	41	39	7	23
>2000	21	40	16	26	73	44.5

Source: Sample Survey (December 2009)



Series 1: Tribes Series 2: Non-tribes

Households to meet their dietary and other livelihood needs are to spend their income, whether from employment or through the ownership of assets, which Amartya Sen[16] put as entitlements. Studies on the causes of malnutrition demonstrated that food is only one factor in the malnutrition equation, and that in addition to dietary intake and diversity, health and disease, and maternal and child care are also important determinants, which are all reflected in household expenditure pattern[17]. On an average tribal house

holds spent Rs. 1141 for food items and the corresponding figure for the non-tribals was Rs.2489 (Table: 5.21 and Figure: 5.11).

Table: 5.21 Households Monthly Expenditure Pattern (Rs.)

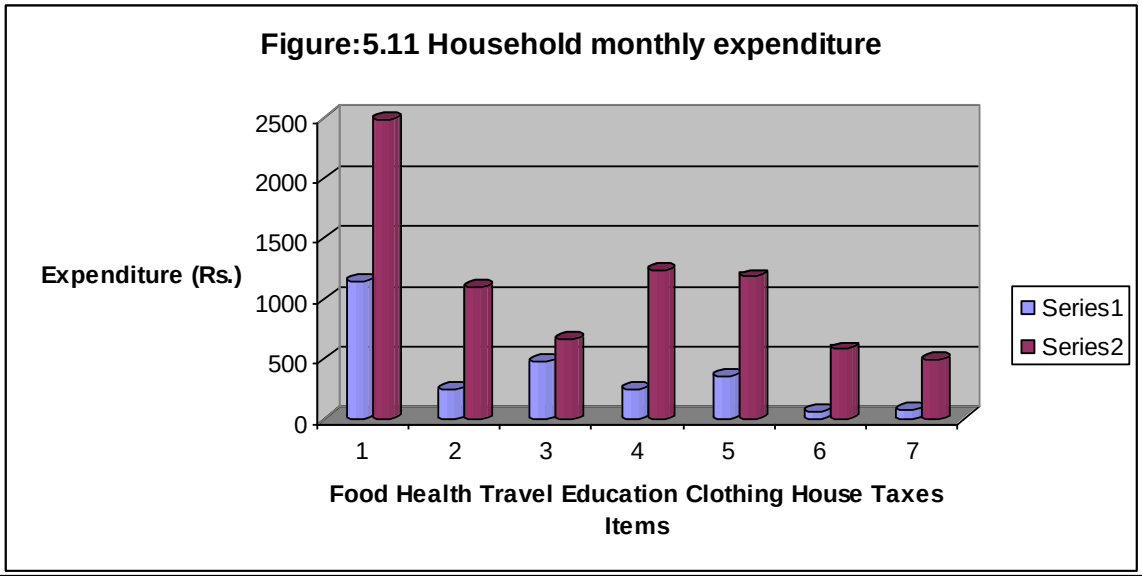
Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Food	938	1206	1280	1141	2489	1815
Health Care	162	381	196	246	1094	670
Travel Expenses	289	759	383	477	664	571
Children's Education	195	324	216	245	1233	739
Clothing	268	407	384	353	1183	768
House Maintenance	92	90	0	61	581	321
Taxes*	106	117	0	74	495	285
Total	2050	3284	2459	2597	7739	5169

Source: Sample Survey (December 2009)

Note: * Including electricity charges

Household food security is a necessary but not sufficient condition for nutritional security. Researchers found that there were two main processes that have a bearing on nutritional security. The first determines access to resources for food for different households. This is the path from production or income to food. As can be seen from Table: 5.22, tribal households' expenditure for food was 44% of the total expenditure, whereas for the non-tribals it was only 32%. The second process involves the extent to which the food obtained is subsequently translated into satisfactory nutritional levels[18]. A host of health, environmental, and cultural/behavioral factors determine the nutritional benefits of the food consumed; this is the path from food to nutrition[19].

The studies on nutritional security demonstrated that growth faltering cannot necessarily be directly related to a failure in household food security. It shifted the emphasis away from simple assumptions concerned with household access to food, resource base, and food systems, by demonstrating the influence of health and disease, "caring" capacity, environmental sanitation, and the quality and composition of dietary intake on nutritional outcomes.



Series 1: Tribes Series 2: Non-tribes

Table: 5.22 Households Monthly Expenditure Pattern (Percentage of Total Expenditure)

Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Food	46	37	52	44	32	35
Health Care	8	12	8	9	14	13
Travel Expenses	14	23	16	18	9	11
Children's Education	10	10	9	9	16	14
Clothing	13	12	15	14	15	15
House Maintenance	4	3	0	3	8	6
Taxes*	5	3	0	3	6	6

Source: Sample Survey (December 2009)

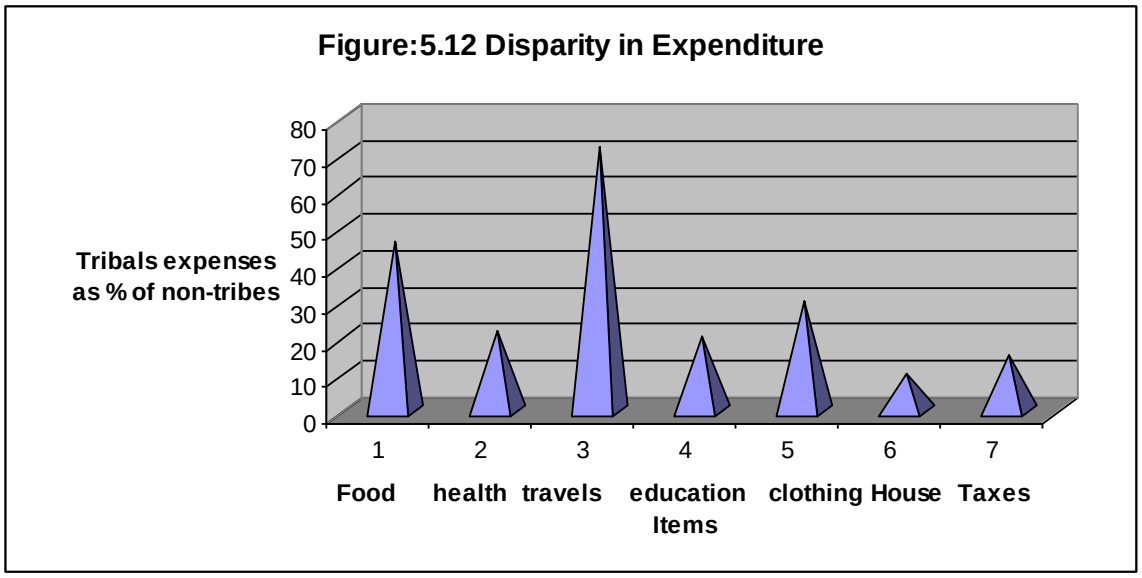
Note: * Including electricity charges

If we make a horizontal analysis of tribes vs non-tribes, as reported from the sample survey (Table: 5.23 and Figure: 5.12), it could be seen that tribal households' expenditure for food is only 46% of the non-tribal households; the corresponding figure for health is only 22% and children's education is only 20%. These figures speak the inequality prevailing in Attappady, which are all reflected in the livelihood security and thereby the socio-economic progress of the tribal communities.

Table-5.23 Tribe's Monthly Expenditure as Percentage of Non-Tribal in Attappady

Particulars	Percentage of Non-Tribes
Food	46
Health Care	22
Travel Expenses	72
Children's Education	20
Clothing	30
House Maintenance	10
Taxes	15
Total Monthly expenses	34

Source: Sample Survey (December 2009)



Housing

A holistic analysis of livelihood security begins with understanding the context for any given population. To understand the macro-level factors that influence the range of possibilities for livelihood systems, we must consider the social, economic, political, environmental, demographic, historical, and infrastructural information[20]. It is this information that sets the parameters within which livelihood strategies operate. Along with food, one of the basic indicators of livelihood security is shelter. In Attappady, 84% of the houses are roofed by tiles/ asbestos (Table: 5.24). Thatched houses account only

3% and the remaining are concrete. The fall in the number of thatched houses is an indicator of livelihood promotion of AHADS.

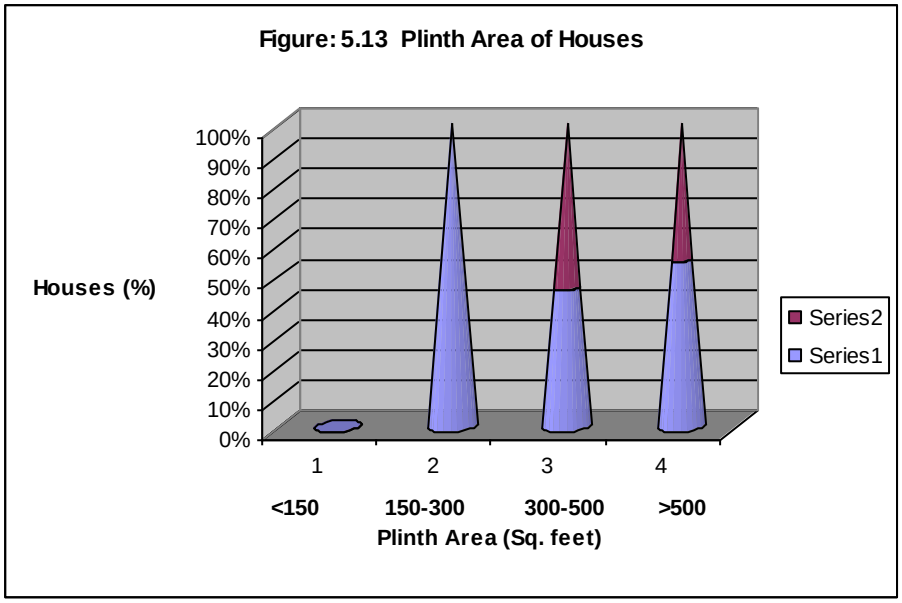
Table: 5.24 Nature of Housing in Attappady, 2005

Type	Numbers
i. Concrete	2289 (13%)
ii. Tiles/ Asbestos	15012 (84%)
iii. Thatched	526 (3%)
Total	17827
Electrified	7306 (41%)

Source: Dept. of Economics and Statistics, 2006

Note: Figures in parenthesis show percentages.

The sample survey results on house type details are furnished in Table: 5.25. The important indicators of housing including plinth area, details on roof, walls and flooring, number of rooms, access to electricity, drinking water and source of fuel are all mentioned in the Table. Majority of the houses have plinth area of 300-500 sq.feet; 63% for tribes and 75% for non-tribes. As can be seen from Figure: 5.13, houses with plinth area of below 300 sq. feet, are owned mostly by the tribal households.



Series 1: Tribes Series 2: Non-tribes

Table: 5.25 House Type Details of Households (%)

Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
i. Plinth Area (Sq. Feet)						
< 150	0	0	0	0	0	0
150-300	17	4	0	7	0	3.5
300-500	50	81	57	63	75	69
>500	33	15	43	30	25	27.5
ii. Roof Type						
Concrete	80	63	0	48	22	35
Tiles	17	37	4	19	78	48.5
Tin sheet	0	0	96	32	0	16
Thatched	3	0	0	1	0	0.5
iii. Walls Type						
Soil	4	0	0	1	22	11.5
Cement	4	36	29	23	67	45
Bricks	92	64	71	76	11	43.5
Tin Sheet	0	0	0	0	0	0
iv. Flooring						
Soil	14	11	0	8	11	9.5
Cement	86	89	100	92	89	90.5
Tiles	0	0	0	0	0	0
v. Number of Rooms						
< 2	0	0	0	0	10	5
2-5	62	59	33	51	80	65.5
> 5	38	42	67	49	10	29.5
vi. Electrified Houses	54	26	23	34	90	62
vii. Drinking water source						
Own wells	0	0	0	0	10	5
Neighbor's Wells	0	27	0	9	20	14.5
Pipe water	100	4	23	42	40	41
Ponds/ Rivers/ Streams	0	69	77	49	20	34.5
Bore wells	0	0	0	0	10	5
viii. Cooking Fuels						
Fire wood	95	100	80	92	62	77
Gobar Gas	5	0	20	8	15	11.5
Cooking Gas	0	0	0	0	23	11.5
ix. Houses with Latrines	90	89	76	85	90	87.5

Source: Sample Survey (December 2009)

The AHADS' initiatives in Total Hamlet Development are evinced in the status of houses in Attappady tribal hamlets. Regarding roof type (Figure: 5.14), walls and flooring tribal households have better facilities than the non-tribes in the area. It exemplifies the role of AHADS in the livelihood promotion of people in Attappady.

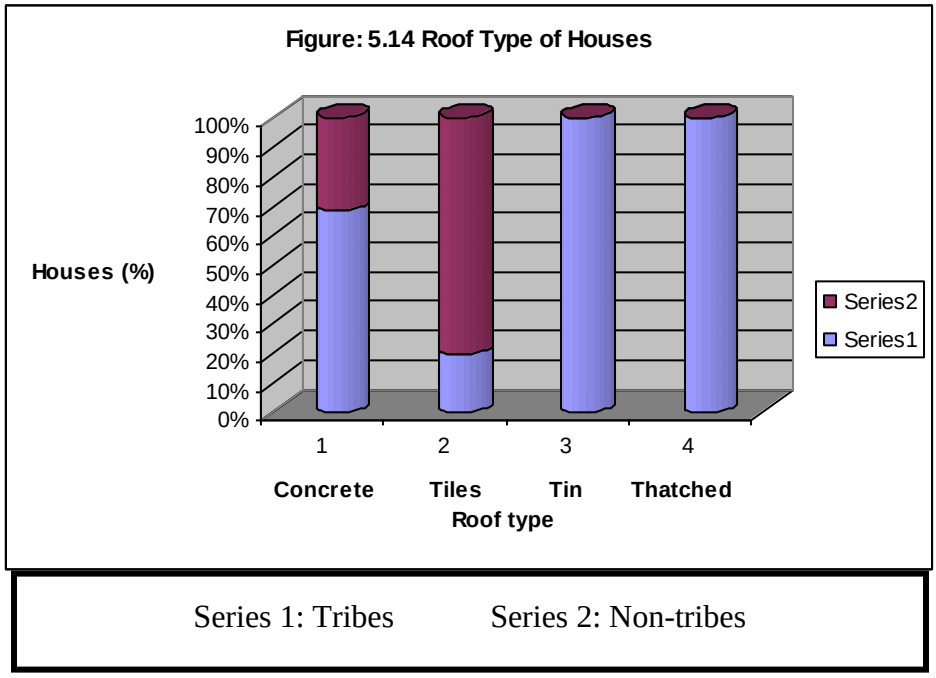


Table: 5.26 Facilities in ST Colonies in Attappady, 2005

Particulars	Numbers
i. ST Colonies	172
ii. ST Houses	6772
iii. ST Houses with electricity	3496 (52%)
iv. ST Houses with water connection	523 (8%)
v. ST Houses with latrine facility	791 (12%)

Source: Dept. of Economics and Statistics, 2006

Note: Figures in parenthesis show percentages

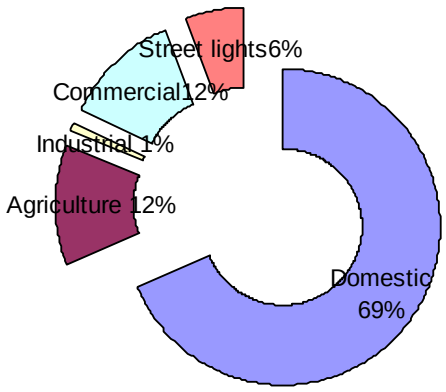
As of 2006, 52% of ST houses have electricity connection (Table: 5.26). In the sample survey it was found that 62% of the houses are electrified in the Block, including ST. Domestic connection accounts for 69% of the total electricity connection in Attappady (Table: 5.27 and Figure: 5.15).

Table: 5.27 Nature of Electricity Connection in Attappady, 2005

	Nature of connection	Number of connections
i.	Domestic	7306 (69%)
ii.	Agricultural	1300 (12%)
iii.	Industrial	86 (0.93%)
iv.	Commercial	1229 (12%)
v.	Others	8 (0.07%)
vi.	Street lights	661 (6%)

Source: Dept. of Economics and Statistics, 2006
Note: Figures in parenthesis show percentages.

Figure: 5.15 Electricity Connection in Attappady



For drinking water purpose people are mainly depending on wells and ponds in Attappady. There are 174 tube wells and 307 public taps in Attappady other than 1099 wells and 219 ponds/ tanks (Table: 5.28). In the sample survey it was found that 49% of

the tribal households are depending upon rivers, streams and ponds for drinking water purpose (Table: 5.25).

Table: 5.28 Drinking Water Sources in Attappady, 2005

Type		Numbers
i.	Tube wells	174
ii.	Wells	1099
iii.	Ponds and tanks	219
iv.	Public taps	307

Source: Dept. of Economics and Statistics, 2006

As given in Table: 5.25, 77% of the households are depending on firewood for cooking fuel. The corresponding figure for tribal households was 92%. Houses with latrine facilities ranged between 85-90% between tribal and non-tribal households.

Regarding the road connectivity in Attappady, there are a total of 492.5 Kilometers of roads in Attappady, of which 36% are earthen roads (Table: 5.29). State highways constitute 9% and PWD roads 17%. As of 2008, 43.82 km. of access paths are constructed by AHADS in Attappady, which benefited 63 hamlets[21].

Table: 5.29 Road Networks in Attappady (KMs), 2005

Type		Length (Kilometers)
i.	State Highways	42 (9%)
ii.	PWD	86.5 (17%)
iii.	Black topped	101.95 (21%)
iv.	Metalled	85.97 (17%)
v.	Earthen	176.08 (36%)
Total		492.5

Source: Dept. of Economics and Statistics, 2006

Land Holdings

Being farming society the livelihood security of population in Attappady is determined to a great extent by the progress of agriculture and is depending upon the size of land holdings. As regards the land holding pattern in Attappady, 49% of the holdings

fall below 0.5 hectares, whereas it constitutes only 13% of the total land area (Table: 5.30). It means that majority of the land owners are small/ marginal land owners. The inequality in distribution of land is further illustrated by land holdings above 2 hectares, which constitute only 9% of the total land holdings, but cover one-third of the total land area in Attappady.

Table: 5.30 Land Holding Size in Attappady, 2001

Land Size (Hectares)	Number of Land Holdings	Area in Hectares
< 0.5	8891 (49%)	1841 (13%)
0.5 – 1	4197 (23%)	3084 (21%)
1 – 2	3394 (19%)	4389 ((31%)
2 – 3	1140 (6%)	2659 (19%)
3 – 4	255 (1.5%)	843 (6%)
4 – 5	249 (1%)	1065 (8%)
5 – 7.5	47 (0.5%)	292 (2%)

Source: Census Reports, 2001

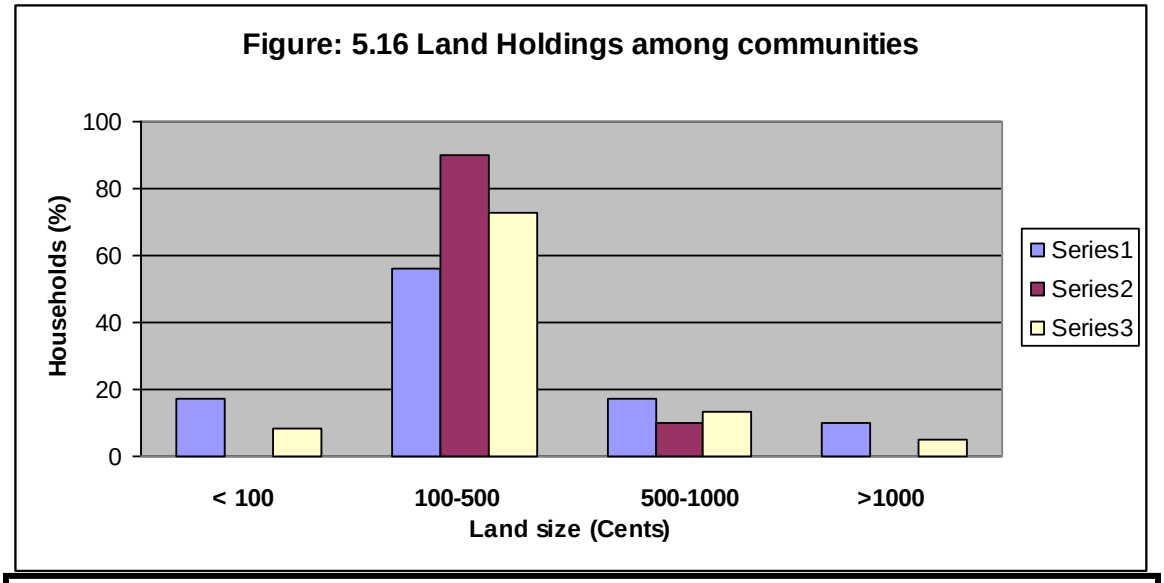
Note: Figures in parenthesis shows percentage of the total

In the sample survey it was found that 56% of the tribal households and 90% of the non-tribal households have landholdings between 100-500 cents of land (Table: 5.31 and Figure: 5.16). Among the Kurumba community 16% of the households have landholdings above 10 Acres in comparison to 4% among the Mudugas.

Table: 5.31 Land Holding Status of Households (%)

Land Size (Cents)	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
< 100	9	30	12	17	0	8.5
100-500	61	55	52	56	90	73
500-1000	19	11	20	17	10	13.5
> 1000	11	4	16	10	0	5

Source: Sample Survey (December 2009)



Series 1: Tribes Series 2: Non-tribes Series 3: Attappady (Avg.)

The crisis in the farming sector has led farmers to commit suicide at places like Wayanad, Idukki and Palakkad in the State. However, widespread activities of AHADS have been instrumental in helping the people of Attappady to face the farming sector crisis with equanimity.

Livestock Population

Being an agrarian community, the livelihood security of people in Attappady is to a great extent facilitated by the animal husbandry. It is an irony that the increased livestock population has been one of the major factors behind ecological deterioration in Attappady, especially destruction of the green pasture land. As of Census figures there are 18190 cattle, 19005 goats and 29221 fowls in the Block (Figure: 5.32).

Table: 5.32 Livestock Population in Attappady, 2001

Panchayat	Cattle	Buffalos	Goats	Fowls	Ducks
Sholayur	4638 (26%)	14 (5%)	7422 (39%)	8631(29%)	3 (1.5%)
Pudur	4600 ((25%)	73 (25%)	5873 (31%)	3660 (13%)	15 (8.5%)
Agali	8932 (49%)	206 (70%)	5710 (30%)	16930 (58%)	159 (90%)
Attappady B	18190	293	19005	29221	177

Source: Census Reports, 2001

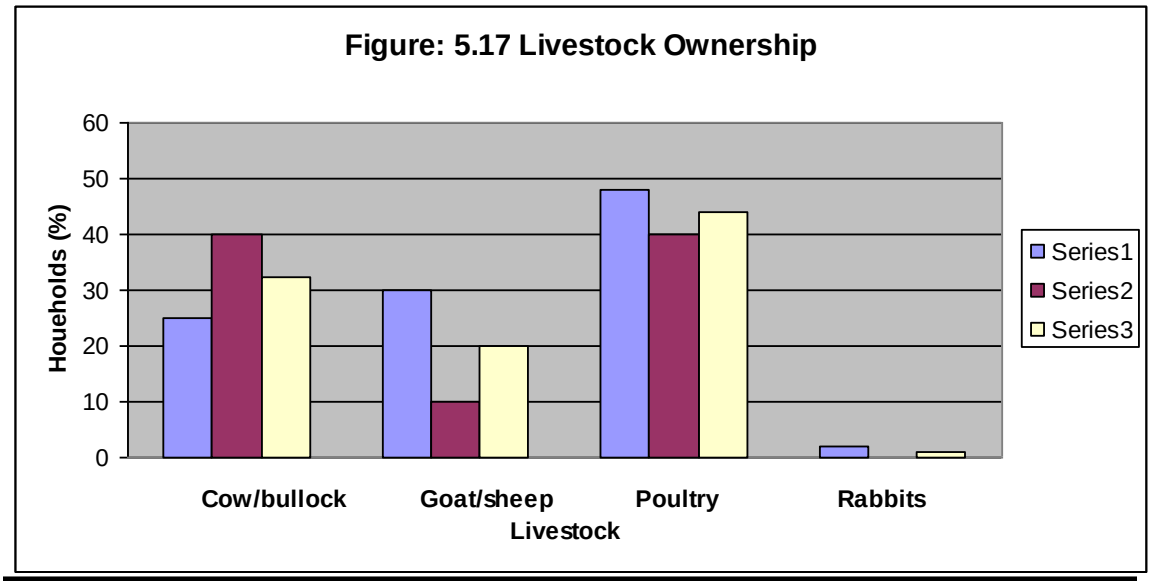
Note: Figures in parenthesis show percentages

In the sample survey it was observed that 32.5 % of households owned cows/bullocks, 20% goats/sheep and 44% owned chickens (Table: 5.33 and Figure: 5.17). The corresponding figure among the tribal communities was 25% for cow/bullocks, 30% goat/sheep, and 48% for poultry.

Table: 5.33 Live Stock Ownership of Households (%)

Livestock	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Cow/Bullock	61	9	5	25	40	32.5
Sheep/ Goat	46	13	32	30	10	20
Poultry	54	38	52	48	40	44
Rabbits	0	5	0	2	0	1

Source: Sample Survey (December 2009)



Series 1: Tribes Series 2: Non-tribes Series 3: Attappady (Avg.)

Livestock had always been germane to the farming systems, complementing crop production, subsisting on the crop system and in turn providing farm yard manure to nourish the soils and improve its water retention capacity.

Banking

An efficient and diversified banking system is a must for promoting savings and channelizing them into investment and helps achieve faster rate of economic growth of a rgion. Thus, the good health of an economy is reflected in the good health of its banking system. In a modern economy, banks are considered not only as the dealers in money but also leaders of development. There are a total of 8 banking institutions in Attappady, including three nationalized banks (Table: 5.34).

Table: 5.34 Banking Institutions in Attappady, 2005

Type	Numbers
i. SBI and SBI Branches	1
ii. Nationalized Banks	3
iii. Scheduled Banks	1
iv. DCB Braches	1
v. Service Cooperative Banks/ Societies	2
Total	8

Source: Dept. of Economics and Statistics, 2006

In the sample survey it was reported that 18.5% of the households have their own bank deposits and the figures for the tribes was only 17% (Table: 5.35). The lowest rate of bank deposits ownership was reported among the Kurumba community.

Table: 5.35 Households' Ownership of Bank Deposits (%)

Having Bank Deposits	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
	19	21	11	17	20	18.5

Source: Sample Survey (December 2009)

Household Appliances

The living standard of the community and thereby the livelihood security in the modern world does not rest with food security but it extents to the ownership over wide range of assets, both tangible and intangible including household appliances. Modern man want diverse type of facilities to satisfy his needs (both luxuries and necessaries) in a relative manner than absolute manner; which in most cases related to the vagaries of demonstration effect especially in rural and semi-rural areas. Attappady is not an exception in this regard; increased employment and income opportunities had leverage effects in the living standards of the population. In the sample survey, as depicted in Table: 5.36, it was found that 44% of the Attappady households owned Television sets, 11% refrigerators and 62.5 % owned telephones/ mobile phones. However, the corresponding figure among the tribal communities was 22% for television sets, 2% for refrigerators and 35% owned telephones/ mobile phones.

Table: 5.36 Ownership of Household Appliances (% of Households)

Household Appliances	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Television	34	21	10	22	60	44
Radio/ Tape recorded/ CD Player	38	28	80	49	40	44.5
Refrigerator	0	0	5	2	20	11
Telephone/ Mobiles	29	36	40	35	90	62.5
Furniture	61	17	30	36	90	63
Others	10	0	0	3	10	6.5

Source: Sample Survey (December 2009)

Health Care Facilities

The urgent need for public delivery of health care services is increasingly being recognized and has drawn considerable attention in recent years in both rural and urban areas. Kerala's remarkable achievements in health care were to a large extent based on its vast network of public health institutions which enabled her to earn the fame of 'Kerala

Model of Health' worth emulating even by advanced countries[22]. The hallmark of this model was the low cost of health care, universal accessibility and availability to the poor sections of the society. In Attappady there are a total of 48 health care institutions including 34 allopathic institutions (Table: 5.37).

Table: 5.37 Health Care Facilities in Attappady, 2005

Type of Health Centers	Numbers
Allopathic	
i. Govt. Hospitals	1
ii. Private Hospitals	5
iii. Govt. Dispensary	1
iv. Private Dispensary	6
v. Primary Health Centers	3
vi. Family Health Centers	18
Auyrvedic	
i. Govt. Dispensary	3
Homeopathic	
i. Govt. Dispensary	3
ii. Private Dispensary	1
Naturopathic	
i. Private	1
Others (Indigenous)	
i. Ottamooli (Private)	5
Sidha	
i. Private	1
Total	48

Source: Dept. of Economics and Statistics, 2006

In the sample survey, as given in Table: 5.38, 54% of the tribal households have reported for health care problems within the last one year. Around 89% of the tribal households have visited health centers at least 10-20 times during the last one year. Among the tribal households, who visited health centers, 90% preferred PHCs or Taluk Hospitals. Majority of the households preferred allopathic treatment (77% of the tribal households) in comparison to other treatment methods. On an average, 66% of the tribal households spent Rs.1000-5000 as medical expenses during the last one year. Around 62% of the tribal households got medicines from the Government Medical Stores.

Table: 5.38 Health Care Details of Households (%)

Health Care Details	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
*i. Major diseases affected**						
TB	3.5	6.5	4	4.5	0	2
Mental Disorder	8	3	0	3.5	0	2
Heart Diseases	3	3.5	0	2	10	6
Head ache	6.5	3	3	4	0	2
Others	39	43.5	37	40	50	45
No major diseases	40	40.5	56	46	40	43
ii. Hospital visitation[+]						
< 10	50	42	64	52	70	61
10-20	41	41	29	37	10	23.5
20-30	2.5	3.5	7	4	10	7
> 30	6.5	6.5	0	2	10	6
No visitations	0	7	0	5	0	2.5
iii. Treatment						
Allopathic	79	90	63	77	83	80
Ayurveda	3	3.5	3	3	0	1.5
Homeo	0	0	0	0	8	4
Indigenous	18	6.5	34	20	9	14.5
iv. Medical Expenses[#] (Rs.)						
< 1000	12.5	10.5	8	10	0	5
1000-2000	43	24.5	28	32	10	21
2000-5000	17.5	33.5	52	34	50	42
> 5000	18	24.5	12	18	40	29
Nominal amount	9	7	0	6	0	3
v. Hospitals visited						
PHC	47	60	59	55	57	56
Taluk/ District Hospital	39	30.5	35	35	21	28
Private Hospital	8.5	3	6	6	14	10
Others	5.5	6.5	0	4	8	6
vi. Availability of Medicines						
Govt. Medical Store	54	63.5	67	61.5	41	51
Private Medical Store	38	29	33	33.5	59	46.5
Self Medication	4.5	7.5	0	4	0	2
Others	3.5	0	0	1	0	0.5

Source: Sample Survey (December 2009)

Notes: * Diseases affected within last one year

+ Number of times hospitals visited for medication within the last one year

Approximate medical expenses within last one year

Food Security

Household Livelihood Security (HLS) generally grows out of food security perspective, but as we discussed earlier, food is only one important basic need among several, and adequate food consumption may be sacrificed for other important needs. Given that the causes of poverty are complex, HLS provides a framework to analyze and understand the web of poverty and people's mechanisms for dealing with it. Starvation deaths were reported from Vellakulam hamlet in the year 1999, before the field implementation of the project started[23]. However, no such incidents are reported now, which is attributed to the availability of year long employment for the local people, especially the tribals due to the project activities.

Table: 5.39 Level of Food Security Satisfaction among Households (%)

Level of Satisfaction	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Enough	70.5	79.5	72	74	80	77
Alright	22.5	10	8	13.5	20	16.75
Insufficient	7	10.5	20	12.5	0	6.25

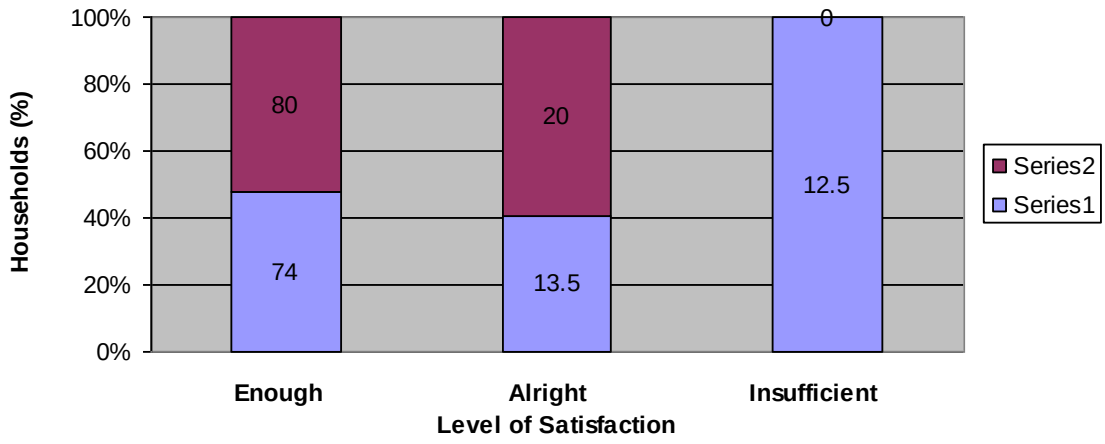
Source: Sample Survey (December 2009)

In the sample survey, 12.5% of the tribal households opined about the insufficiency of food (Table: 5.39 and Figure: 5. 18). Among the Kurumba community it was as high as 20%. The non-tribal communities in Attappady are reported to have placed relatively at better position on food security grounds.

It is clear that adequate food availability at the national or state level did not automatically translate into food security at the individual and household levels. As we discussed in the previous Chapter, researchers and development practitioners realized that food insecurity occurred in situations where food was available but not accessible because of erosion to people's entitlement to food. Food entitlements of households derive from their own production, income, gathering of wild foods, community support (claims), assets, migration etc[24]. Thus a number of socio-economic variables have an

influence on a household's access to food. In addition, worsening food insecurity was viewed as an evolving process where the victims were not passive to its effects.

Figure: 5.18 Food Security in Attappady



Series 1: Tribes Series 2: Non-tribes

Diseases related to malnutrition were prevalent in Attappady in the past. A health survey in 51 hamlets covering 2,051 families in the year 1999 had reported 437 cases of anemia. However reports from health care centers testify considerable reduction in such cases today.

The evolution of the concepts and issues related to household food and nutritional security led to the development of the concept of Household Livelihood Security. The HLS models discussed in the previous Chapter helps for a broader and more comprehensive understanding of the relationships between the political economy of poverty, malnutrition, and dynamic and complex strategies that the poor use to negotiate survival. The models place emphasis on household actions, perceptions and choices; food is understood to be only one of the priorities that people pursue. People are constantly being required to balance food procurement against the satisfaction of other basic material and non-material needs[25].

Socio-Cultural Activities

The socio-economic progress of a society is mostly linked to participation of the community members in the cultural activities. The modern man derives his/her welfare not only from the economic prosperity but also from the happiness they derive from active and passive participation in sports, culture, arts, literary activities etc. Literacy level and social commitment are few among many factors underlying the socio-cultural progress. The Government is a leading facilitator of such socio-cultural activities by setting up the infrastructural backgrounds. In Attappady, for the socio-cultural progress of the society, there are 127 Anganwadis, 34 Sports clubs, 36 Arts clubs and 72 community television sets other than community halls, public library facilities and cinema theaters (Table: 5.40).

Table: 5.40 Social and Cultural Institutions in Attappady, 2005

Type of Institution		Numbers
i.	Public library	6
ii.	Reading rooms	4
iii.	Anganwadies	127
iv.	Balawadies	4
v.	Rural education centers	3
vi.	Community halls	4
vii.	Sports clubs	34
viii.	Arts clubs	36
ix.	Community television sets	72
x.	Cinema theatres	2

Source: Dept. of Economics and Statistics, 2006

Developments in the mass media front, such as television, news papers and internet, played a leading role in the socio-cultural progress, which is mostly related to economic development. As mentioned in Table: 5.41, around 16% of the tribal households owned television sets, the corresponding figure for the non-tribes was 80%. People's TV programs of interest include serials, cinemas, sports, cultural programs and music. On an average, tribal people, who have access to Television, are watching TV

programs for 1:58 hours per day and the corresponding figure for the non-tribals was 2:58 hours. The dispersion of TV has hindered the popularity of radio programs; however, among the tribal communities radio programs are still popular. Generally, people of Attappady did not have much interest in watching movie in cinema theaters. It is noteworthy to see that people of Attappady have acknowledgeable participation in cultural programs. See Table: 5.41 for more details on household entertainments.

Table: 5.41 Households' Entertainment Details (%)

Particulars	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
i. Teleision						
Own TV	24.5	13.5	8	15.5	80	47.75
Hamlet TV	0	13.5	0	4.5	0	2.25
Neighbors' TV	61.5	32	84	59	10	34.50
No Access	14	41	8	21	10	15.50
ii. TV Cable						
Own	17.5	6.5	8	10.5	40	25.25
Hamlet	0	13.5	0	4.5	0	2.25
Neighbors'	48	25	72	48.5	20	34.25
No Cable	34.5	55	20	36.5	40	38.25
TV Programmes of Interest						
Serials	25.5	14	24	21	21	21
Cinemas	42.5	39.5	29	37	21	29
News	29	33	27	30	26	28
Cultural and Sports	3	13.5	20	12	32	22
Average number of hours watching TV programmes	1.45	1.74	1.56	1.58	2.58	2.08
Interested radio Programmes						
News	6.5	19.5	36	57	10	15.5
Music	10.5	20	36	21	10	16
No Radio Programmes	83	60.5	28	22	80	68.5
Last Movie watched in Cinema Theatre						
2 years back	0	4	4	4	8	6
1 year back	4	0	0	1	0	0.5
1 month back	0	3.5	8	4	2	3
No Movie	96	92.5	88	91	90	90.5
Participation in cultural programmes (%)	94	94.5	96	95	98	96.5

Source: Sample Survey (December 2009)

A number of institutions operate in the community milieu that influences livelihood outcomes. The State not only provides services, but also provides safety nets, changes policies, and can limit freedoms that can have positive or adverse effects on livelihood systems. AHADS is to a large extent instrumental in providing enabling conditions or constrain opportunities for households. Informal civil society (e.g. informal community networks) consists of the web of networks within which individuals and households belong. These networks can have positive or negative influences on the livelihood strategies that people pursue. The Private Sector can also create or limit Households' opportunities.

Performance of Total Hamlet Development Programme (THDP)

This program aims to address total hamlet development plan for tribal areas, which envisages comprehensive development by incorporating the social, cultural and individual needs through participatory approaches from planning, execution, implementation and usage ensuring transparent and tribal empowerment practices.

Table: 5.42 Performance of THDP at Hamlet Level

Particulars	Performance Weightage (%)
Status of Houses Constructed	
Completed	23
Ongoing	72
Not Started	5
Hamlets having Landscaping	30
Hamlets having water supply schemes	5
Households' rating of the Houses constructed	
Excellent	15
Good	75
Not up to the expectation	10
Bad	0

Source: Sample Survey (December 2009)

Housing and landscaping, accessibility, drinking water supply, environmental hygiene and sanitation, sustainable farming systems and livelihood generation are the major components of the program. In the selected hamlets for sample survey, only 23% of the houses have completed construction by December 2009 (Table: 5.42). In 30% of the hamlets landscaping was also part of the THDP, but only in 5% of hamlets they had drinking water supply schemes attached to it. Households' view on the houses constructed under THDP was also rated well in 90% of the cases.

Constraints under THDP

The project implementation primarily depends on local skill and manpower alone. During the peak agricultural seasons, availability of adequate labour becomes a constraint for implementation of the project activities. As a result, the progress of the project is affected adversely. The inadequate availability of raw materials in Attappady for civil constructions and the higher costs involved in transportation of materials to remote corners slows down the pace of the progress of the project[26]. Transportation problems hindered construction work in 45% of the cases, correspondingly material shortage affected in 24% of the cases (Table: 5.43).

Table: 5.43 Households' View on the Difficulties Faced under THDP

Difficulties Faced	Households' Observation (Weightage in %)
Transportation problem in bringing materials	45
Materials shortage	24
Rain	11
Interruption in works	7
Others	13

Source: Sample Survey (December 2009)

The construction work was executed by PIs on estimates prepared in accordance with the Government approved rates. The demand equation in terms of skilled man power and raw materials exceed local supply, resulting in constant increase in the cost of civil construction. Therefore, many PIs experienced losses in the construction work taken up by them, thus slowing down the pace of implementation. The end result, as reported by

the households, was cost escalation in construction works. As given in Table: 5.44, in 25% of cases households reported cost escalation.

Table: 5.44 Households' View on the Cost Escalation under THDP

Perspective	Households' Observation (%)
Cost escalation	25
No cost escalation	9
No comments	66

Source: Sample Survey (December 2009)

The THDP works are implemented through Ooru Vikasana Samithis (OVS) with the complete participation of local people[27]. Households have good faith in their OVSs, as evinced from Table: 5.45; around 58% of the households remarked about their OVS's good performance. Only in few cases people reported for improvements.

Table: 5.45 Households' View on the OVS

Perspective	Households' Observation (Weightage in %)
Good performance	58
To be improved	18
Problems in arranging labour	8
Materials not arranged on time	2
Trainings required	8
Lack of co-operation	2
Election required	4

Source: Sample Survey (December 2009)

Interest groups related to production and consumption of illicit liquor and ganja act as formidable challenges to people, especially the women groups, and occasionally members of TKS are harassed in this process[28]. Such incidents decelerated the social drive of the project.

Inadequate co-ordination between the members of various PIs and political parties in the democratic process occasionally created conflicts, hampered smooth communication of project objectives and slow down the pace of implementation.

Illiteracy and lack of experience in conflict resolution, especially among the Executive Committee members often slow down the outreach of project objectives. Due to high investment profile of the project, the PIs and staff of the AHADS mostly interact technically to complete targeted activities on time. It leaves little time for emergence of ideas and procedures for equitable growth and distributive justice affecting growth of social capital.

The project has a conditional time slice upto the year 2010 (Later it was extended to August 2010). Therefore, the insecure nature of employment makes experienced employees of AHADS to seek secured jobs elsewhere.

Other Benefits Received from AHADS

People got various livelihood assistances under the eco-restoration project, which include assistance for agro-forestry and plantations, field crops, community resource centers, hamlet paths, environment awareness through literacy campaigns, and trainings other than the schemes we discussed in the Chapter so far. Around 64% of the tribal households got assistance for field crops, 67% got assistance under agro-forestry and 79% participated in environmental literacy campaigns (See, Table: 5.46 for more details).

Table: 5.46 Major Benefits* Received from the AHADS (%)

Assistance	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Field Crops	54	49	88	64	64	64
Agro-forestry	30	9	64	34	67	51
Community Resource Centre	69	23	96	63	10	37
Hamlet Path	37	88	79	68	27	48
Environmental literacy	5	66	77	79	73	76
Trainings	13	16	26	18	80	49

Source: Sample Survey (December 2009)

Note: * Other than the THDP

The household survey also collected suggestions of people for the improvement of AHADS activities, as given in Table: 5.47. Around 32% of the people are of the

opinion that AHADS activities are to be continued. Tribal households wanted for more road connectivity to hamlets (44%) and asked for assistance for side wall construction (14%). Non-tribal households are in need of assistance for irrigation support (39%) and marketing support (17%) from AHADS initiatives.

Table: 5.47 Households' Suggestions for the Modification of AHADS Activities (Weightage in %)

Suggestions	Irula	Muduga	Kurumba	Tribal Average	Non-tribal	Attappady Average
Continuation of farm activities	42	34	17	31	33	32
Planting more trees	0	2	0	1	0	0.5
Road construction to hamlets	7	51	74	44	6	25
Side wall construction	26	8	9	14	5	9.5
Irrigation support	6	2	0	3	39	21
Drinking water	13	2	0	5	0	2.5
Marketing support	6	1	0	2	17	9.5

Source: Sample Survey (December 2009)

Leadership development

More than 5000 people's representatives are leading 93 UAs, 166 OVSs, 54 JFMCs, 111 TKSs and 198 IGA groups[29]. The opportunities to officiate responsible positions in the PIs are in turn developing group and regional leadership among the local people. They are also exposed to administrative skills and finance management, which is being recognized by the three-tier Panchayats in the Government.

Endnotes

1. The quality of the networks is determined by the level of trust and shared norms that exist between network members. People use these networks to reduce risks, access services, protect themselves from deprivation, and to acquire information to lower transaction costs**.**
2. Scoones. I, 1998, 'Sustainable Rural Livelihoods: A Framework for Analysis,' *Working Paper: 72*, Brighton: Institute of Development Studies.
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26. AHADS, 2008, *Op. Cit*.
27. For more details refer Chapter-6.
28. *Ibid*.
29. For more details refer Chapter: 6.

CHAPTER-6
SUSTAINABILITY OF PEOPLE'S INSTITUTIONS CREATED UNDER AHADS

The implementation of the Project has set in an innovative practice of transparent governance through People's Institutions (PIs). A new stratum of neighborhood leadership has emerged to assess, plan, implement and monitor developmental works for sustainable environment and secure livelihoods. AHADS, through implementation of this Project has been able to demonstrate the synergy between environment and development and the implementation arrangements made to achieve this synergy qualify these practices to be one of the best practices in eco-restoration and social developmental works[1].

While local people, functioning under various PIs plan and implement various components of the Project, AHADS support them with financial and technical resources and facilitate investments in a transparent and participatory manner. To strengthen this approach and to maintain transparency, AHADS intervenes with the PIs regularly through its team of professionals. Present Chapter analyses the present status of PIs and its sustainability; primary data collected through sample survey is used to analyze various elements in this Chapter. It will also review the extent of people's participation in the development initiatives.

Present Status of PIs

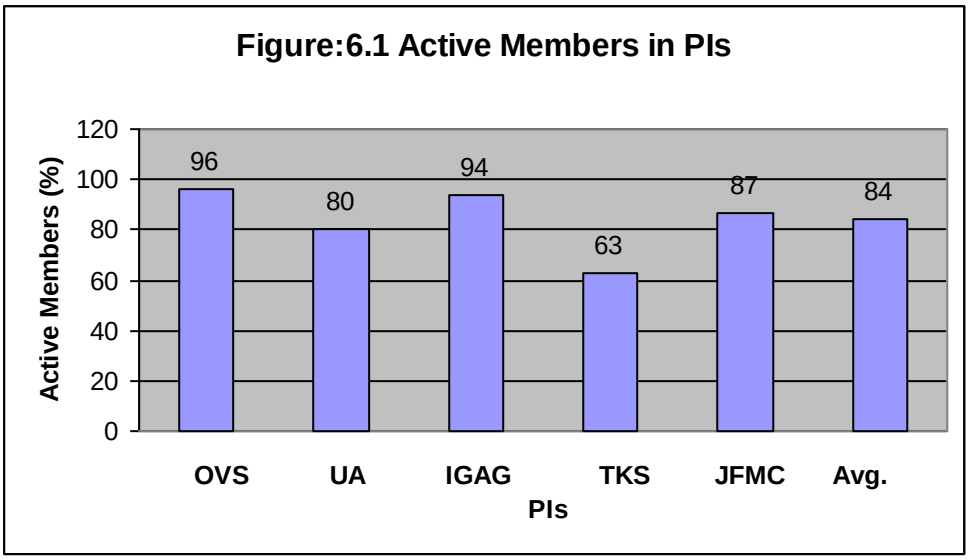
AHADS has promoted a range of organizations of the local people to implement various activities of the Project to achieve the objectives. These organizations, as mentioned earlier, include Users' Associations (UAs), Ooru Vikasana Samitis (OVSs), Joint Forest Management Committees (JFMCs), Thaikula Sangams (TKSs) and Income Generating Activity Groups (IGAGs). As discussed earlier, a total of 644 PIs[2] are created under the AHADS' initiative with 7163 members in Executive Committees[3]. Even though the initiative and enthusiasm including the level of participation of various

sections of the society in the PIs was quite high in the beginning, the activity status has slowly declined over the years. The Sample Survey also focused on the sustainability of the PIs created under the AHADS; as given in Table: 6.1 and Figure: 6.1; the active members[4] in various PIs averaged 84%. The participation was as low as 63% among TKS members and was high among OVS members (96%).

Table: 6.1 Number of Active Members in PIs (%)

People's Institutions	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
Active Members (%)	96	80	94	63	87	84

Source: Sample Survey (December 2009)



When we analyze the activity status of each PIs through the status of Executive Committees (ECs) and the number of meetings convened within the last two quarters, it could be seen that on an average 22 meetings are convened (Table: 6.2); maximum number of meetings was convened in UAs (26) followed by IGAGs (22). As per the By-law, the EC of PIs should meet at least once in a month, but at the field level more number of meetings are convened than what was stipulated. It ensures the vivacity of the PIs and the desire of the people towards local area development.

Table-6.2 Number of Executive Committee Meetings Convened within Last Six Months

People's Institutions	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
Meetings Convened	20	26	22	NA	21	22

Source: Sample Survey (December 2009)

Composition of Executive Committees

The exuberance of the PIs towards development outlook depends on the leadership of ECs of such institutions and the people behind them. Age composition, educational backgrounds and activity status are some of the factors which affect the liveliness of the EC members and thereby the performance of the PIs. The sample survey revealed that 53% of the EC members belong to the very active age group of 18-35 years with a maximum of 58-59% for JFMCs and OVSs (Table: 6.3 and Figure: 6.2).

Table-6.3 Age Composition of Executive Committee Members in PIs

Age Composition (Years)	Executive Members in PIs (%)					
	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
<18	0	0	0	0	0	0
18 – 35	59	51	47	48	58	53
35 – 55	35	47	51	46	40	44
> 55	6	2	2	6	2	3

Source: Sample Survey (December 2009)

The educational background of the EC members, as given in Table: 6.4, shows that a staggering 25% are without any formal education; even then, their participation and the number of EC meetings convened are very high. It shows that there is no direct relationship between educational background and people's participation in PIs at Attappady. There is a wide variation in educational status between EC members of various PIs. As regards TKSs 55% are without formal education[5], where as for IGAGs

uneducated constitutes only 8%. The sample survey further revealed that around 72% of the EC members have educational background of below +2; graduates and technically qualified contributed only few among the EC members.

Figure:6.2 Age Composition of EC Members in PIs

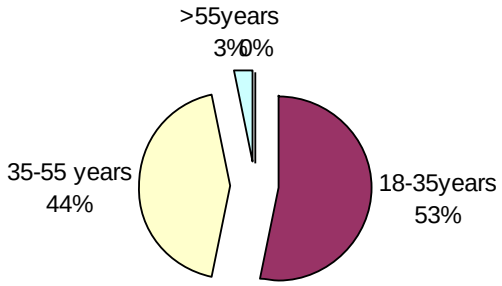


Table-6.4 Educational Status of Executive Committee Members in PIs (%)

Age Composition (Years)	Educational Status of EC Members (%)					
	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
No Formal Education	38	11	8	55	14	25
< 10^{th} Grade	43	60	27	34	48	42
10^{th} – 12^{th} Grade	17	25	59	10	33	30
Graduates	1	1	3	1	5	2
Technical	1	2	3	0	0	1
Professionals/ Post Graduates	0	1	0	0	0	-
Total	100	100	100	100	100	100

Source: Sample Survey (December 2009)

Educational background is one of the indicators of the activity status; as depicted in Table: 6.5, 80% of the EC Members are laborers, either in farm sector or in the rural informal sector. Among the EC members of OVSs, 89% are laborers. Housewives accommodate only 8% among the EC members, but is as high as 16% for JFMCs and 13% for TKSs; the latter being women's organization, the share of housewives among EC members was lesser than that of JFMCs.

Table-6.5 Activity Status of Executive Committee Members in PIs (%)

Employment Status	Employment Status of EC Members (%)					
	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
1. Laborers	89	83	83	70	76	80
2.House Wives	3	1	9	13	16	8
3.Live-stocking	0	11	0	7	0	4
4.Public/ Private Jobs	6	3	2	0	8	4
5. Others*	2	2	6	10	0	4
Total	100	100	100	100	100	100

Note: Others include old aged and also those who are studying
Source: Sample Survey (December 2009)

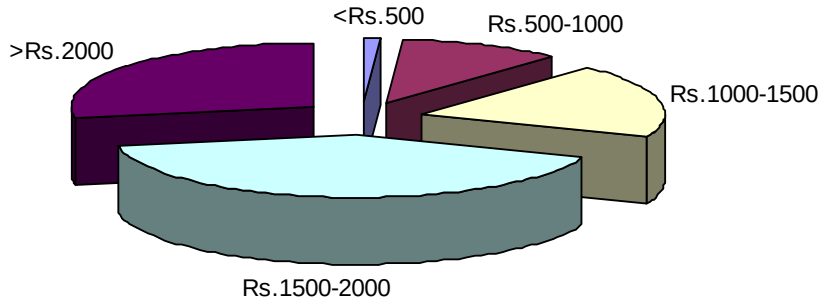
The educational background and activity status of the EC members together decide the income status. As given in Table: 6.6, the sample survey discloses that 69% of the EC members have monthly income status of Rs.1500 and above. However, around 12% are having income of below Rs.1000, which shows the extent of poverty prevailing among the EC Members, but is not an obstacle in their participation in PIs. The poverty rate, as reflected through low income, is as high as 31% among the EC members of IGAGs. For more details refer Table: 6.6 and Figure: 6.3.

Table-6.6 Monthly Income Status of Executive Committee Members in PIs (%)

Monthly Income (Rs.)	Income Status of EC Members (%)					
	OVSs	UAs	IGAGs	TKSs	JFMCs	Average
< Rs. 500	1	0	3	0	0	1
500 - 1000	2	11	28	8	5	11
1000- 1500	12	11	50	15	9	19
1500- 2000	47	38	15	60	43	41
> 2000	38	40	4	17	43	28
Total	100	100	100	100	100	100

Source: Sample Survey (December 2009)

Figure: 6.3 Income Status of EC Members in PIs



Income Generating Activity Groups (IGAGs)

There are 219 IGAGs formed, each with 12 to 15 members. These Groups are meant to take up sustainable income generation activities through promotion of micro-credit among members in the project area. Based on an initial experiment income generation activities are being promoted with focus on tribal groups and women. Based on the recommendations of an in-house IGA Consultant and JBIC sponsored review

IGAG implementation under the Project were taken to create an IGAG trust and to strengthen the IGA coordinator and staff[6].

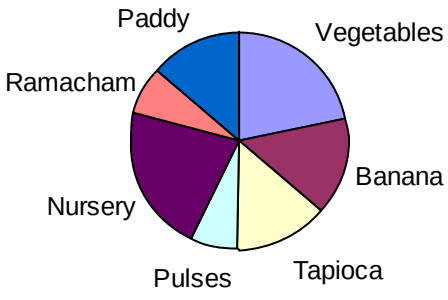
In the sample survey it was found that a good number of IGAG schemes are coming under vegetable farming and plant nursery (22% each) followed by banana, tapioca and paddy cultivation (14% each). For more details on schemes implemented by IGAGS refer Table: 6.7 and Figure: 6.4. Average actual expenditure per scheme ranged between Rs. 2667 and Rs. 75,000. The survey revealed that almost all schemes of IGAGs are able to earn profits within the range of 33% to 90%.

Table-6.7 Major Schemes Implemented by IGAGs and its Performance

Schemes	Weightage (%)	Average Actual Expenditure (Rs.)	Probable Performance
1. Vegetable Cultivation	22	2667	33% Profit
2. Banana Cultivation	14	13,500	50% Profit
3. Tapioca Cultivation	14	11,250	50% Profit
4. Pulses Cultivation	7	1,000	90% Profit
5. Nursery	22	63,333	67% Profit
6. Bed of Ramacham	7	75,000	90% Profit
7. Paddy Cultivation	14	6,000	50% Profit

Source: Sample Survey (December 2009)

Figure:6.4 Major Schemes of IGAGs



Regarding the ongoing schemes of IGAGs, 36% are coming under banana cultivation (Table: 6.8). Average estimated cost of the schemes ranged between Rs. 3000 to Rs.65,000. However, the average actual expenditure, so far, was between 47% and 100%.

Table-6.8 Ongoing Schemes Implemented through IGAGs and its Performance

Schemes	Weightage (%)	Average Estimated Cost (Rs.)	Average Expenditure So far (Rs.)	Average Expenditure So far (%)
1. Banana cultivation	36	49,000	23,000	47
2. Tapioca cultivation	10	3,000	3,000	100
3. Ginger Cultivation	9	10,000	6,000	60
4. *Ramacham* Cultivation	9	65,000	65,000	100
5. Others	36	NA	NA	NA

Source: Sample Survey (December 2009)

The IGAGs producing fencing posts and planting stocks are totally dependent on AHADS' project activities for their markets. If external market has not been exploited for these products, most of the IGAGs may not be able to sustain in the long run. Sericulture development schemes are something different from the IGAG concept of AHADS. This profitable venture requires rather low lying land because irrigation is needed for mulberry raising, and relatively high capital investment[7]. Local tribal communities are less competent to participate in it, so that more low investment type sericulture development should be evolved.

Ooru Vikasana Samitis (OVS)/ Hamlet Development Committees

The OVSs are intended to take up development works in and around the tribal settlements. These are exclusive tribal committees, which are formed in 166 out of 187 hamlets. Thirteen members Executive Committee is governing each OVS, of which at least six members should be women[8]. It has a general body consisting of all adult

members in the hamlet. The five traditional functionaries of tribal hamlet, Ooru Moopan (the head), Kuruthala (in charge of law and order), Vandari (treasurer), Mannukkaran (agriculture expert), and Jathikaran (ritual specialist) are ex-officio members of Executive Committees[9].

Table-6.9 Performance of Major Schemes Implemented by OVS*

Schemes	Weightage (%)	Average Estimated cost (Rs.)	Average Actual Expenditure	Expenditure as Percentage of estimate	Average Number of beneficiaries
1. Bio-gas plants	3	30,750	32,136	105	2.5
2. Side wall protection/ Landscaping	19	2,53,489	2,23,943	88	31.4
3. CRC	10	3,67,000	3,40,000	93	42
4. Soil conservation	3	63,000	54,000	86	53
5. Village road	15	1,19,722	1,08,723	91	56
6. Check dams	15	1,19,722	1,08,723	91	90
7. Rabbit farming	1	15,800	15,650	99	7
8. Trench sanitation	2	3,00,000	2,50,000	83	35
9. Drinking water	3	3,35,000	2,80,000	84	35
10.Smokeless Ovens	2	1,04,978	50,000	48	35
11. Electrification	3	1,35,000	96,500	71	40
12. Nursery/ Seeds Distribution	7	1,29,000	1,16,175	90	49
13. Agronomic activities	3	3,20,000	2,70,000	84	13.5
14. Anganwadi building	3	2,61,000	2,33,500	89	54.5
15. Others	11	1,38,333	1,31,667	95	60

Source: Sample Survey (December 2009)
* Other than House Construction schemes

The performance of major schemes implemented by OVS (other than house construction under THDP) shows that side wall protection and landscaping (19%), check dams and village roads (14% each) dominate the OVS activities (Table: 6.9). Average estimated cost of the schemes ranged between Rs. 100,000 to Rs.79, 89,125. The actual expenditure was as low as 48% for smokeless *choolas* and was as high as 105% for house construction. The average number of beneficiaries ranged between 2.5 and 90 for each schemes. However, among the ongoing schemes 38% are house construction schemes with an actual expenditure of 39% (so far) of the outlays (Table: 6.10). Average number of beneficiaries ranged between 21and 49 people.

Table-6.10 Major Ongoing Schemes of OVS

Schemes	Weightage (%)	Average Estimated Cost (Rs.)	Average Expenditure So far		Average Number of beneficiaries
			Rs.	%	
1. House Construction	38	79,89,125	31,05,290	39	49
2. Check dams/ Irrigation schemes	10	6,92,000	3,25,000	47	35
3. Landscaping/ side walls	10	6,27,500	2,00,000	32	21
4. Village roads	4	1,00,000	40,000	40	26
5. Soak pits	5	3,14,000	2,00,000	64	26
6. Rainwater harvesting	5	1,22,000	23,000	53	32
7. Drinking water	5	4,00,000	2,50,000	63	43
8. Others		1,73,000	1,42,500	82	23

Source: Sample Survey (December 2009)

Joint Forest Management Committees (JFMCs)

These Committees are meant for taking up afforstation and protection works in the State forest land. There are 54 JFMCs under the Project, which are registered with the Divisional Forest Office. JFMCs are lead by a nine member Executive Committee (at least 3 women); priority was given to SC/ST members. Local forest officer as ex-officio member is Secretary to the Committee. JFMC's programme was intended to tackle main reasons for forest denudation like forest fire, cattle grazing, uncontrolled exploitation of trees and other forest produce, encroachment of forest, illegal transportation of timber, ganja cultivation, poaching and other human interventions, destroying forest[10]. The

participants and beneficiaries are those people who dependent on forest and forest produce for their livelihood.

The JFMC's programme has four stages[11].

- Location of the area, training institutions, building up social/ voluntary organizations and training the officials and the people.
- In the preparatory stage, finding the problems and conducting joint studies, formation of participatory forest management plan and JFM Committees are involved; which are to be registered with the DFO, Mannarghat.
- In the planning stage, the main activity was preparing the plan for managing the forest resources in all its details with the full participation of local communities.
- In the implementation stage, micro plans are to be prepared and close monitoring and evaluation to be done.

As the benefits started flowing from the JFMC's programmes, it became clear that most of it were going to non-tribal families[12].

Major schemes implemented by the JFMCs include fire-lines, trenches, soil mulching, weeding and agro-forestry. The average estimated cost of each scheme was Rs. 7,96,008; however the actual expenditure was only 61% of the outlay. Details on the major schemes implemented by the JFMCs are given in Table: 6.11 and that of the ongoing schemes are presented in 6.12. As regards the ongoing schemes the expenditure so far ranged between 51% for the fire line work to 62% for forestry activities. For more details refer Figure: 6.5.

Table-6.11 Major Schemes Implemented by JFMC

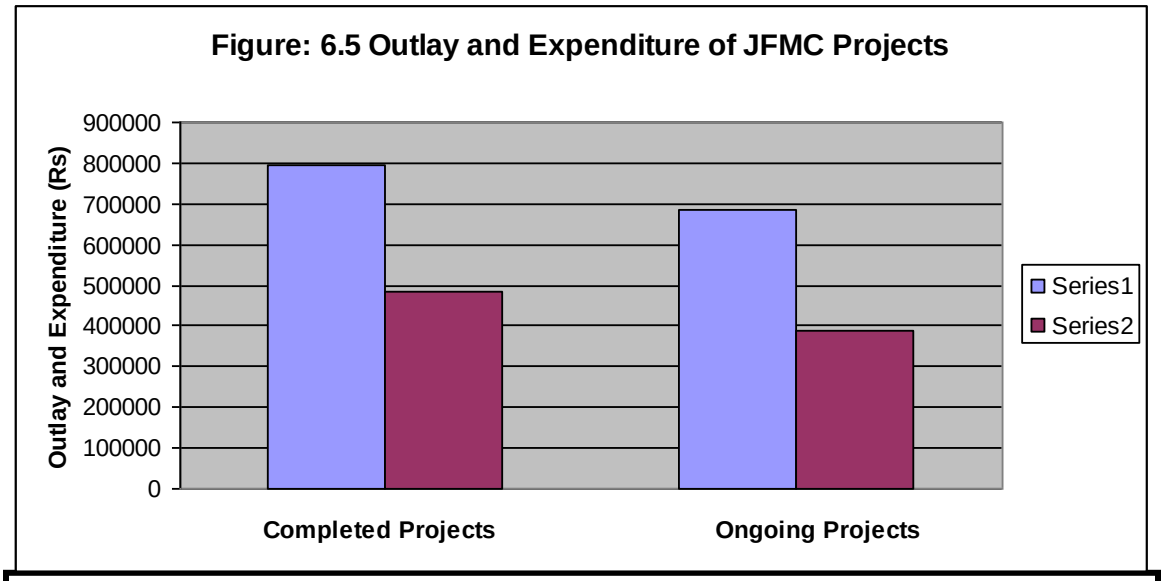
Schemes	Average Estimated Cost (Rs.)	Average Expenditure	
		Rs.	%
Fire lines/ Trench/ Soil mulching/ weeding/ agro forestry	7,96,008	4,86,435	61

Source: Sample Survey (December 2009)

Table-6.12 Major Ongoing Schemes of JFMC

Schemes	Average Estimated Cost (Rs.)	Average Expenditure so far	
		Rs.	%
1. Fire line work	6,66,733	3,43,347	51
2. Forestry	7,05,000	4,36,042	62

Source: Sample Survey (December 2009)



User Associations (UAs)

Beneficiaries of a micro-watershed form the User Associations, which execute all works pertaining to the micro-watershed. UAs have been formed in 93 micro-watersheds out of the 146 micro-watersheds in the Project area. Nine members Executive Committee govern the UAs, of which at least five should be women and four tribals. All adults living in the micro-watershed area could be the members of UAs. To ensure full participation of all members and to prevent political manipulation for the formation of ECs, lot of ground work was done against the opposition of the vested interest groups[13].

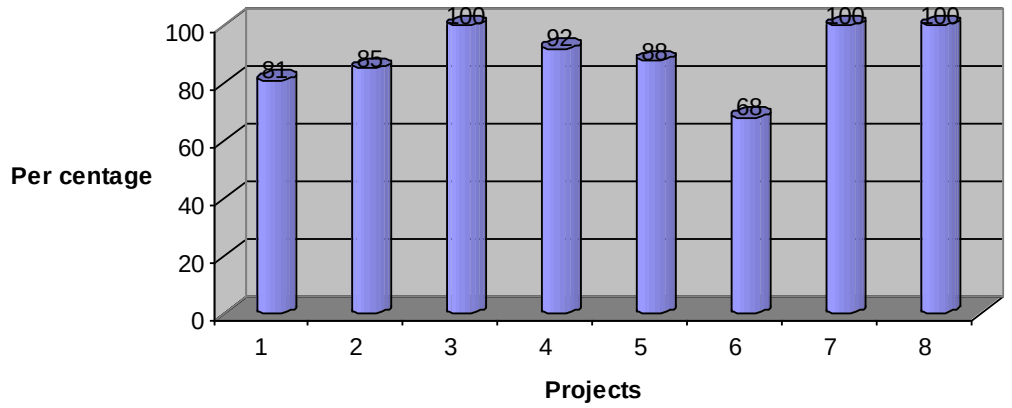
Details collected through the Sample Survey on the major schemes implemented by the UAs are furnished in Table: 6.13. Check dams, rain water harvesting systems and tanks contributed 24% of the schemes implemented by UAs followed by farm nurseries and other agronomic activities (16% each). Average estimated costs ranged between Rs. 26,600 to Rs. 3, 92,600. The average actual expenditure as a percentage of estimate was as high as 100% for compost schemes and farms and a lowest of 68% for sidewall/ soil conservation schemes (See, Figure: 6.6). The average number of beneficiaries ranged between 6 people for biogas schemes to 152 for check dams and other drinking water projects. We can observe a negative correlation between the size of the beneficiaries and the average expenditure as a percentage of the estimates.

Table-6.13 Major Schemes Implemented by UAs

Schemes	Weightage (%)	Average Estimated Cost (Rs.)	Average Expenditure		Average Number of beneficiaries
			Rs.	%	
1. Farm Nursery	16	2,19,000	1,78,200	81	37
2. Check dams/ Rain water harvesting/ Tanks	24	4,02,375	3,43,474	85	152
3. Compost	6	1,22,500	1,22,500	100	9
4. Biogas	6	37,750	34,750	92	6
5. Agronomy	16	4,44,060	3,92,600	88	49
6. Side wall/ soil conservation	13	5,55,000	3,78,250	68	102
7. Rabbit Farms. Goats	9	26,600	26,600	100	9
8. Vegetable farms	10	1,10,000	1,10,000	100	7

Source: Sample Survey (December 2009)

Figure: 6.6 Expenditure as a percentage of Estimates in UA Projects



Project 1: Nursery/ Project 2: Irrigation/ Project 3: Compost/ Project 4: Biogas/ Project 5: Agronomy/ Project 6: Sidewall/ Project 7: Rabbit/ Project 8: Vegetable farms

Analysis of the ongoing schemes implemented by the UAs reveal that the average estimates are higher for irrigation schemes (Rs. 14,81,500) and low for sericulture schemes (Rs.30,000). As given in Table: 6.14, average expenditure as a percentage of the estimates ranged between 49% and 80% (so far).

Table-6.14 Ongoing Schemes of UAs

Schemes	Average Estimated Cost (Rs.)	Average Expenditure so far	
		Rs.	%
1. Biogas	1,50,500	74,025	49
2. Rabbit farming	72,500	58,300	80
3. Sericulture	30,000	20,300	68
4. Organic manure	1,25,000	93,000	74
5. Irrigation	14,81,500	10,00,000	68

Source: Sample Survey (December 2009)

Taikulasangams (TKSs)/ Women's Groups

When the contracting system was replaced by the trained committee of the actual beneficiaries, the people started getting wages at the government approved rates, much higher than the existing wage rates, which lead to increase in disposable incomes. The contractor's lobby and the liquor mafia organized brewing of illicit liquor and distributing it by various means stealthy to the hamlets[14]. The women in the area jointly opposed the brewing of illicit liquor in the area, through which the TKSs are formed under the guidance of AHADS. Thus, these groups of tribal women have emerged as a result of their empowerment as a social corrective force. These groups are constituted in each tribal hamlet to fight against the social evils like alcoholism, drugs, etc.

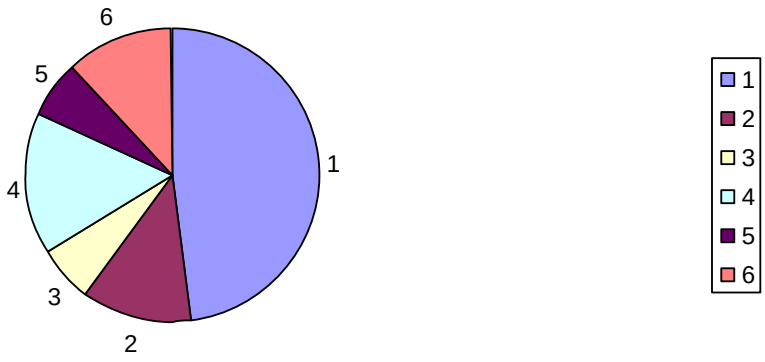
Major activities of TKSs, as substantiated through the Sample Survey, are given in Table: 6.15 and Figure: 6.7. Prohibition of liquor consumption in the hamlets (48%), actions against domestic violence (16%), control of drugs addiction including Ganja and literacy campaigns (12% each) constitute the major activities of the TKSs.

Table-6.15 Major Activities of TKSs

Activity	Weightage (%)
1. Liquor prohibition	48
2. Drugs addition control	12
3. Action on atrocities against women	6
4. Action against domestic violence	16
5. Awareness classes for teenagers	6
6. Literacy campaigns and tuition for school kids	12

Source: Sample Survey (December 2009)

Figure: 6.7 Major Activities of TKS



Series 1: Liquor prohibition/ Series 2: Drugs control/ Series 3: Action against atrocities against women/ Series 4: Action against domestic violence/ Series 5: Awareness classes/ Series 6: Tuition classes

Level of Cooperation

Livelihood approaches put people at the centre of activities rather than the service or resource to be managed. AHADS has put resource at the centre rather than people or service. The scope for strengthening the robustness and sustainability of livelihood strategies often lies most directly with empowerment of the primary stakeholders or use to make their own informed choices about what is required to make their livelihood more secure. This can be achieved with respect to the types of service beneficiaries receive and the means by which they are provided. Without substantial internal changes in AHADS, it has not been able to respond to this role of clients' responsive service provider. As a result there is little or no change in the internal relationship with beneficiaries and thus critically no sustained changes in access or influence on key livelihood assets[15].

The success and sustainability of any PIs, is determined to a great extent by the cooperation between the community and such institutions, which is directly associated with the confidence of the common man to the PIs. Among the five PIs created by AHADS, the participation and cooperation of community to the PIs was reported to be high for IGAGs (63%). On an average 90% of the PIs (who are surveyed) reported for excellent/ good remark on the co-operation from the community; however, the

cooperation from the AHADS was 100% (excellent/ good) for all the PIs surveyed (Table: 6.16).

Table-6.16 Participation and Cooperation of Community and AHADS to PIs (%)

People's Institutions	Community (%)			AHADS (%)		
	Excellent	Good	Not to the expectation	Excellent	Good	Not to the expectation
1. TKS	40	30	30	73	27	0
2.IGAG	63	37	0	57	43	0
3. OVS	31	63	6	69	31	0
4. JFMC	0	100	0	75	25	0
5. UA	17	67	16	86	14	0
Average	30	60	10	72	28	0

Source: Sample Survey (December 2009)

The level of cooperation of AHADS towards the PIs, as mentioned in Table: 6.17, varies from one institution to another. For instance, public awareness classes (72%) was a major source of assistance from AHADS to TKSs, where as for IGAGs it was trainings (31%), for OVSs and JFMCs technical advices (corresponding weightages include 36% and 43%), and for UAs' financial/ technical support.

Table-6.17 Level of Cooperation of AHADS to PIs

People's Institutions	Level of Cooperation	
	Cooperation	Weightage (%)
1. TKS	i. Public Awareness classes	72
	ii. Assistance for liquor prohibition in Ooru	21
	iii. Literacy campaigns	7
2. IGAG	i. Evaluation and review	25
	ii. Training	31
	iii. Public awareness creation	13
	iv. Bank loan arrangements	12
	v. Marketing arrangements	13
	vi. Technical co-operation	6
3. OVS	i. Estimate preparation	9
	ii. Technical advices	36
	iii. Public awareness	18
	iv. Fund allotments on time	5
	v. Community togetherness	9
	vi. Trainings	9
	vii. Employment generation	14
4. JFMC	i. Advices and cooperation	43
	ii. Moral strength to act	14
	iii. Trainings	29
	iv. Financial support	14
5. UAs	i. Financial/ Technical support	58
	ii. Public awareness	25
	iii. Trainings	17

Source: Sample Survey (December 2009)

Challenges Facing the PIs

The sustenance of the PIs created by AHADS depends upon a host of factors including the existence of AHADS itself. The initiatives commenced by the PIs are commendable from the local community's point of view as they are replicable models of transparent participatory rural development form. However, the AHADS as an institution has attracted to some extent hostility from different quarters due to various reasons[16], which has adversely affected the progress of the implementation of schemes through the PIs. These hostile groups and agencies include anti-social elements, contractors and traders, local politicians and decision makers, government departments, some sections of non-tribal people[17].

The five categories of PIs created by AHADS are facing entirely diverse challenges, even though some are common. Most of the challenges facing the PIs are attached to the function for which it was created. The TKSs have dissuaded tribal people from production and consumption of illegal liquor, however, lack of cooperation from the Police/ Excise departments (50%) and community members (34%) are highlighted in the sample survey as the major challenges facing the TKSs. Income generating activities of any people's initiatives are in need of financial and marketing support. In the case of IGAGs also the facts are not unusual; higher interest rate of bank loans (44%) was the major challenge reported for the IGAGs (Table: 6.18).

In agrarian societies labour scarcity is an unusual obsession; but in Kerala, construction sector is facing severe challenges including the skilled manpower. Being the implementation agency of the THDP, the OVSs are faced with severe challenges in completing the construction works within the stipulated time. Lack of availability of skilled labour and materials (20% weightage each) constituted the important factors that hinder the smooth function of the OVSs. The afforestation and forest conservation activities are the crux of AHADS' eco-restoration project, which was implemented through the JFMCs. As reported in the Sample Survey, the JFMCs' major challenges include the threats attached to the anticipated conclusion of activities of AHADS and poor support of the community in most cases. UAs are registered organizations at the

level of micro-watershed and represent the total population of the respective micro-watershed. The main responsibility of a UA is to implement the participatory micro-plan prepared for that micro-watershed. As evinced in the Sample Survey, lack of cooperation from the beneficiary community is the major challenge facing the UAs.

Table-6.18 Major Challenges Faced by People's Institutions

People's Institutions	Major Challenges Faced	
	Challenges	Weightage (%)
1. TKS	i. Lack of co-operation from Police/ Excise Departments in anti-liquor campaigns	50
	ii. Political links of liquor mafia	8
	iii. Lack of co-operation from the community within the Ooru	34
	iv. Threats from the liquor mafia	8
2. IGAG	i. Financial scarcity	11
	ii. Higher interest of bank loans	44
	iii. Lack of co-operation from the community members	22
	iv. Lack of marketing support	12
	v. Low prices of the products in the public market	11
3. OVS	i. Infrastructure problems	13
	ii. Lack of skilled labour	20
	iii. Delay in materials availability	20
	iv. Poor community participation at the initial stages	7
	v. Poor community co-operation	7
	vi. Time shortage for the completion of construction works	7
	vii. Issues related with NGOs	6
	viii. Lack of proper land for construction	13
	ix. Land related issues	7
4. JFMC	i. Threats due to the vacuum created because of the anticipated discontinuance of AHADS	33
	ii. Issues related with the continuance of existing watchers	33
	iii. Poor community cooperation at the initial stages	34
5. UAs	i. Financial constraints	13
	ii. Lack of cooperation from the beneficiaries	38
	iii. Issues related with fire line work	13
	iv. Loss of initial tempo	13
	v. Issues related with the sustenance	13
	vi. Labour scarcity	10

Source: Sample Survey (December 2009)

Improving the Performance of PIs

The Sample Survey also gave proper attention to the modification of the PIs by rectifying the draw-backs if any, or by mitigating the challenges. Even though, the AHADS as an institution itself is going to be wrapping up very soon, the survival of PIs created by it is definitely going to be a subject of concern. As mentioned in Table: 6.19, the suggestions for the improvement of each PIs are focused on the beneficiary community, which might not have existence in veracity at least in some cases. As regards TKSs, ensuring the co-operation of the Police/ Excise Officials (39%) followed by the support of the *Ooru* members (17%) are the primary apparent suggestions for the improvement of its activities; which will underline the challenges that we discussed in Table: 6.18.

More or less correspond to the challenges faced, the IGAGs also reported for the need for funds at low interest rate (25%). The other major requirements emerged during the survey include need for insurance coverage (25%) and the support of Kudumbashree units. Implementation of agriculture projects (27%), involvement of Panchayats (13%), employment training (13%) and ensuring the continuance (13%) are the major requirements suggested for the sustenance of the OVSs. The continuation of forest conservation measures and maintenance of existing farm practices with a view on employment generation are the suggested orientations for the JFMCs, as reflected in the Sample Survey.

The Sample Survey comes out with some demanding suggestions for the enhancement of the performance of the UAs based on the watersheds. Ensuring financial viability (20%), inflection of interventions in the farm sector (20%), continuance of the existing projects (20%), etc are some of the imperative among them. For a detailed survey of suggestions for the improvement of the PIs refer Table: 6.19.

Table-6.19 Suggestions for the Improvement of People's Institutions

People's Institutions	Suggestions for Improvement	
	Suggestions	Weightage (%)
1. TKS	i. Ensure the co-operation of the Ooru members	17
	ii. Ensure the co-operation of Police/ Excise Departments	39
	iii. Ensure the co-operation of OVSs, UAs and JFMCs	6
	iv. Government interventions	11
	v. Co-operation of Panchayat institutions	6
	vi. Political support and co-operation at the local levels	6
	vii. Separate office buildings for TKS	4
	viii. Ensure co-operation of youngsters	11
2. IGAG	i. Technical trainings required	8
	ii. Funds required at low interest rates	25
	iii. Facilitation required from Kudumbashree	17
	iv. Insurance coverage required	25
	v. Transportation facilities for marketing	8
	vi. Proper marketing support	9
	vii. Planting materials produces are to be marketed through Krishibhavans.	8
3. OVS	i. To prepare more agriculture projects	27
	ii. Construction of new houses	7
	iii. Agro-marketing centre	7
	iv. Involvement of panchayats	13
	v. ITDP programmes to be implemented through OVS	7
	vi. Instead of giving the THDP work to NGOs AHADS should directly do the work	6
	vii. Employment training	13
	viii. Proper coordination of volunteers	7
	ix. Ensure continuance with proper modifications	13
4. JFMC	i. Continuance of the existing forest conservation measures initiated by the JFMC.	50
	ii. Existing farm practices are to be maintained.	25
	iii. Employment generation schemes are to be continued with the conservation of forest.	25
5. UAs	i. Ensure financial availability.	20
	ii. Expansion of activities in the farm sector, Marketing support.	20
	iii. Permanent employment generation schemes.	10
	iv. Panchayat level activities to be implemented through the UAs.	10
	v. Extended support for the continuing projects.	20
	vi. Training required	10

Source: Sample Survey (December 2009)

The institutional capacities of the PIs and the resolve of local people for similar transparent working in future without conflict and discord, require further strengthening and refinement. In the event of the Project winding up without completing the mission, the inefficient and non-transparent system may re-emerge. Therefore, a functional synergy needs to be build up among PIs constituted under the Project, the three tier Panchayat institutions and the line agencies of the Government, so that the public funds available at various sources for the development of Attappady are mobilized to facilitate informed community participation in the delivery of sustainable development[18]. For this purpose, AHADS has to work still harder to enhance social capital of local community, especially the tribals and assist the civil society in accepting watershed based micro-plans as local area development plans. The strategy of implementation depending upon grass root level democratic and participatory mechanisms manifested in this Project need to be made socially acceptable at all levels of administration.

End Notes

1. P.K Sivanandan, *Evaluation cum Documentation of AWCECP*, Institute of Societal Advancement, Thiruvananthapuram.
2. 93 UAs, 166 OVSs, 54 JFMCs, 111 TKSs and 219 IGAGs
3. With 66 % women Executive Committee members and 85% tribal Executive Committee members.
4. Those who are actively participating in various meetings and other proceedings
5. TKSs are the PIs of women and these figures shows that proportion of people without formal education are high among women.
6. Rakesh Saxena, et.al., 2006, *Mid Term Evaluation of AWCECP, Kerala*, Institute of Rural Management, Anand.
7. AHADS, 2008, *Status Report 2008*, Agali, Palakkad.
8. P.K Sivanandan, *Op. Cit.*
9. *Ibid*
10. AHADS, 2008, *Op. Cit*.

11. AHADS, 2006, *Status Report 2006*, Agali, Palakkad.
12. Rakesh Saxena, et. al, 2006, *Op. Cit*.
13. *Ibid*.
14. *Ibid*.
15. *Ibid*.
16. *Ibid*.
17. AHADS, 2008, *Op. Cit*.
18. Rakesh Saxena, et. al, 2006, *Op. Cit*.

CHAPTER-7
FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The Attappady Wasteland Comprehensive Environmental Conservation Project (AWCECOP) aims at eco-restoration and sustainable livelihood using participatory resources management, which is implemented by AHADS, an autonomous institution under the Local Self Government Department of Government of Kerala. Once only tribals inhabited, but now Attappady has become the recipient of waves of migrants from the plains of the East and the West, which eventually made the tribes a minority. The tribal population belongs to the Irula, Muduga and Kurumba communities, where as the non-tribals consist of settlers from other parts of Kerala, Tamil Nadu and Karnataka.

For the purpose of project implementation, 745 square kilometers area of Attappady is divided into 146 micro-watersheds, of which only 93 have habitations and hence 93 micro-watershed based UAs have been constituted democratically. Watershed based comprehensive natural resources management model envisaging treatment of degraded lands from ridge to valley has been developed and being replicated in the project areas. Forest regeneration works including soil and moisture conservation, gully plugging, planting and fencing works have been completed by JFMCs in 11,000 ha. of state forest land. Studies show that due to AHADS' initiatives forest land expanded by 3-4 % between 2001 and 2005 and agriculture land increased by 37%. During the same period degraded lands declined by 24%. Seven million plants, both in the state forest land and private waste lands have covered the otherwise degraded and fallow lands of Attappady due to the project implementation.

Private waste land development works under the Project was envisaged to improve degraded wastelands in the Project area; land development works consisting of contour trenching and bunding were undertaken in identified areas. Area under biomass conservation increased from 792 ha. in 2002-03 to 1774 ha. by 2007-08. Area under afforestation increased by 985% between 2001 and 2004; by 2007-08 it was around 428 ha. Between 2001-08 period, agro-forestry plantation in private land expanded by 93%. Afforestation and soil and water conservation activities, both in forest and private

wastelands have resulted in rejuvenation of streams that have completely dried away decades ago. The attempts in the project *to make the water walk instead of run'* have greatly enhanced sub-surface water availability resulting in high discharge of water into the streams.

Activities are undertaken with the objective of protection of existing water resources and to enhance recharge of aquifers in order to ensure water availability on a sustained manner; it includes development of water resources, ground water recharging systems and irrigation systems. Gravity irrigation, irrigation channels, lift irrigation, mobile irrigation and tanks are the major schemes implemented under irrigation systems by AHADS.

Land based development, whether it is soil and water conservation or afforestation, tended to benefit the rich; tribals, who had been dispossessed of their best lands, could not derive benefits from the programs undertaken through the UAs. Accordingly the Total Hamlet Development Programme (THDP) was included as part of the Project. It involved planning, designing and constructing living space to suit the needs of each individual family based on their needs, cost-effective water supply and sanitation systems, and facilities for education, recreation and cultural activities. Housing and landscaping, accessibility, drinking water supply, environmental hygiene and sanitation, sustainable farming systems and livelihood generation are the major components of the programme. Regarding the construction works, it is highlighted that contracts signed in 2004 were as per the PWD schedule of rates prevailing at that time. However, due to escalation in costs and the consequent financial crunch and the pressure on the community to make good the loss, progress of the work has either been adversely affected or in certain cases abandoned or not initiated at all.

Major achievements of the project include the following.

ix. *People's Participation*: Participatory development is being led by 597 PIs that include 5206 Executive Members; almost every third person in Attappady is associated with some PI of the Project. People are involved right from the planning to execution of activities.

x. *High Women Participation*: Women actively participated in all activities, particularly in social corrective measures; 63% of the representatives in Executive Committee of various PIs are women.

xi. *High Tribal Community Participation*: The 166 OVSs ensured full participation of all tribal groups in the development activities; 85% of tribal are represented in the Executive Committees (ECs) of PIs.

xii. *Good Governance:* Equitable and transparent implementation arrangements enabled the benefits of the Project reach the most deserving masses. Regular annual General Body meetings make the Executive Committees accountable to the beneficiaries. Democratic organization of PIs and annual social audits enhanced good governance.

xiii. *Watershed approach:* The fact that development activities are based on total watershed conservation and development ensures better integration and judicious distribution of financial and human resources.

xiv. *Integrated Approach:* The various ecological and socio-economic components of the Project are implemented in an integrated manner through multi-disciplinary teams, responsible for taking rational decisions.

xv. *Adaptive Management*: In the absence of suitable replicable models for eco-restoration, the experience of AHADS evolved through its own design is a constant source of inspiration. 'Doing through learning and learning through doing' are the guiding principles for adapting strategies and approaches in the Project implementation.

xvi. *Empowering people as Instrument of Distributive Justice*: Through various out reach actions such as constant awareness programmes, trainings, exposure visits, environment literacy, dropout reduction, equitable distribution of benefits among beneficiaries etc, the Project attempts to improve social capital, thereby creating new avenues for development planning and implementation. The Project took special

care of the marginalized and backward people so as to enhance their capacities and skills to regenerate environment and take development to their doorsteps.

Findings

Out of the total population of 66,171, 55% belongs to general category. The tribals constituted majority of the population up to 1961; but are now in minority constituting only 41%, for settlers from outside outnumber them. Although significantly diluted, the traditional social hierarchies are still maintained in most of the tribal settlements. Irula are the numerically dominant (84%) and relatively advanced among the three tribal groups in Attappady.

The major findings at the socio-economic impact level as evinced through the sample survey are furnished below.

Demography

i. Gender dimension of demographic transition is assessed through the sex ratio; in Attappady, sex ratio is comparatively weaker than that of the State average. As of 2001 Census the ratio was 981 in Attappady, where as it was 1058 for the State. Among the tribal communities the ratio is as low as 818 for Kurumba community, however, the Muduga's have a better ratio of 1083, even better than the State average.

ii. The working age group (from 18-55years) population contributed around 55% of the total population with marginal variation between tribals vis-à-vis non-tribals.

iii. To a greater extent family size will declines as the demographic transition takes place in juxtaposition to socio-economic development. In Attappady, around three quarters of the families have size of 3 to 5 members; among the tribal communities especially Kurumba 27% have family size above 5 members.

iv. Among the elderly population in Attappady, 81.5% are married. Widowed account for 13% among the tribal communities as against only 4% among non-tribals. Divorced/ separated account only 3% among the tribal

communities with marginal variation between the tribes. Marriage at the early age is quite common among the tribal communities in the area, which is exemplified by the lesser proportion of unmarried elderly population (8.5%).

Literacy and Education

v. In Attappady the literacy rate is only 54% (2001), indicating the backwardness of the area, which is far behind the district average of 84%. As per the sample survey, the literacy rate in Attappady is 65.5%, which shows an improvement over 2001. However, among the tribal communities literacy rate is only 49%.

vi. Educational status of households indicates that 19.5% did not have any formal education; the corresponding figure for the tribal communities was a staggering 28%. Another 57% of the tribal communities could not complete their 10^{th} Grade in schools. Graduates, technically educated and professionals constitute a meager of 2% among the tribal community.

vii. One of the areas, where we can observe the reflection of literacy rate is the reading habit in the society, which in most cases is replicated through the news paper reading. In remote areas such as Attappady, lack of accessibility of reading materials is one of the major hindrance to the reading habit. In the survey it was observed that only 21.6% of the households have access to news papers in Attappady, where as the figures for the tribal community was as low as 3.2 %.

viii. On an average 1.15 children are going to school per family in Attappady; the corresponding figures of the tribal households come to 1.3. The drop-out rate is 4.75 in Attappady, as against the state average of 0.83%. Drop-out rate is as high as 18% among Kurumba community and for Muduga it is only 4.5%. The fall in school dropouts when compared to the previous years is interpreted to be attributed to the better socio-economic conditions emerging in the hamlets as a result of project implementation.

ix. One of the major reasons for the school drop-out in Attappady is financial difficulty of the parents as evinced in the Survey. In some cases it will lead to Child labour. However, it was reported that Child labour has drastically reduced during the project implementation period, which can be related to the

decreasing school dropouts, as more and more children are being sent to the schools. Distance to the School was earlier indicated as one of the reasons for children not going to school, especially girls. The survey indicates that the average distance to the school from the hamlets was about 8.58 KM with variations at different levels, ranging from LPS to Higher Secondary level. In the case of Kurumba community the distance was as high as 38 KM for Secondary and Higher Secondary schools from the hamlets.

Labour, Employment and Wage

x. The sample survey shows that 63% of the working aged people are laborers and among the tribes it is as high as 81%, most of them are employed in the informal sector without any social security benefits. Community-wise employment status reveals that these figures are too high for the Kurumba community (86%). The organized sector employment accounted for 14% in Attappady, where as the corresponding figures for the tribal community was only 9.5%.

xi. The AHADS' project has so far generated more than 3.45 million man days of employment. In the sample survey it was reported that the Project has generated on an average 5.2 man days of employment per week for men and 4.7 man days for women each in the beneficiary hamlets. The Project has helped to a great extent in generating employment among the tribal communities. On an average 18% of the tribal communities got more than 200 man days of employment within the last one year. Average number of working hours ranged between 7.3 hours for men and 7.6 hours for women. Average daily wages for men was as high as Rs.158 and Rs.118 for women in the tribal hamlets. The corresponding figures for the non-tribal counterparts came to Rs.110 and Rs.100 respectively.

xii. When AHADS started project implementation, the daily wage rate prevailing in Atappady, especially in Eastern Attappady, was as low as 30 to 50 rupees. AHADS has established and ensured a just wage rate of 80 to120 rupees through the PIs; efforts are being made to enhance the daily wage rate to Rs. 125 for both men and women in tune with the wages provided under

Employment Guarantee Programmes of the Panchayats. However, in practice at the grass root level, there was gender gap in distribution of daily wages; female wages was only 81% of the male wages. This gap was much higher among the tribal communities and is as high as 71% among the Irula community. But, there is really a great increase in the wages of laborers ranging from 40-75% in the hamlets after the initiation of the Project, which has directly translated into the livelihood outcomes through access to food and other basic needs.

Income and Expenditure Pattern

xiii. As mentioned earlier, the livelihood security component of income generation is directly related to the strategy of employment creation at the local level. Around 35% of the tribal communities have monthly income lesser than Rs.1500, which translates into the poverty ratio at the hamlet level. The corresponding figure for the non-tribals was only 20% in Attappady.

xiv. On an average tribal household spent Rs. 1141 for food items and the corresponding figure for the non-tribals was Rs. 2489. Tribal households' expenditure for food was 44% of the total expenditure, whereas for the non-tribals it was only 32%.

xv. It could be seen that tribal households' expenditure for food is only 46% of the non-tribal households; the corresponding figure for health is only 22% and children's education is only 20%. These figures speak the inequality prevailing in Attappady, which are all reflected in the livelihood security and thereby the socio-economic progress of the tribal communities.

Housing, Drinking Water and Energy

xvi. In Attappady, 84% of the houses are roofed by tiles/ asbestos. Thatched houses account only 3% and the remaining are concrete. The fall in the number of thatched houses is an indicator of livelihood promotion of AHADS.

xvii. The AHADS' initiatives in Total Hamlet Development are evinced in the status of houses in Attappady tribal hamlets. Regarding roof type, walls and flooring tribal households have better facilities than the non-tribes in the area.

It exemplifies the role of AHADS in the livelihood promotion of people in Attappady.

xviii. For drinking water purpose people are mainly depending on wells and ponds in Attappady; in the sample survey it was found that 49% of the tribal households are depending upon rivers, streams and ponds for drinking water purpose.

xix. The Sample Survey reported that 77% of the households are depending on firewood for cooking fuel. The corresponding figure for tribal households was 92%. Houses with latrine facilities ranged between 85-90% between tribal and non-tribal households.

Ownership of Assets

xx. As regards the land holding pattern in Attappady, 49% of the holdings fall below 0.5 hectares, whereas it constitutes only 13% of the total land area. It means that majority of the land owners are small/ marginal land owners. The inequality in distribution of land is further illustrated by land holdings above 2 hectares, which constitute only 9% of the total land holdings, but cover one-third of the total land area in Attappady. In the sample survey it was found that 56% of the tribal households and 90% of the non-tribal households have landholdings between 100-500 cents of land.

xxi. In the sample survey it was observed that 32.5 % of households owned cows/bullocks, 20% goats/sheep and 44% owned chickens. The corresponding figure among the tribal communities was 25% for cow/bullocks, 30% goat/sheep, and 48% for poultry.

xxii. It was reported that 18.5% of the households have their own bank deposits and the figures for the tribes was only 17%. The lowest rate of bank deposits ownership was reported among the Kurumba community.

xxiii. The living standard of the community and thereby the livelihood security in the modern world does not rest with food security but it extents to the ownership over wide range of assets, both tangible and intangible including household appliances. It was found that 44% of the Attappady households owned Television sets, 11% refrigerators and 62.5 % owned telephones/

mobile phones. However, the corresponding figure among the tribal communities was 22% for television sets, 2% for refrigerators and 35% owned telephones/ mobile phones.

Progress of THDP

xxiv. In the selected hamlets for sample survey, only 23% of the houses have completed construction by December 2009. In 30% of the hamlets landscaping was also part of the THDP, but only in 5% of hamlets they had drinking water supply schemes attached to it. Households' view on the houses constructed under THDP was also rated well in 90% of the cases.

xxv. The inadequate availability of raw materials in Attappady for civil constructions and the higher costs involved in transportation of materials to remote corners slows down the pace of the progress of the project. Transportation problems hindered construction work in 45% of the cases, correspondingly material shortage affected in 24% of the cases; in 25% of cases households reported cost escalation.

xxvi. The THDP works are implemented through Ooru Vikasana Samithis (OVS) with the complete participation of local people. Households have good faith in their OVSs, around 58% of the households commented about their OVS's good performance.

xxvii. People got various livelihood assistances under the eco-restoration project, which include assistance for agro-forestry and plantations, field crops, community resource centers, hamlet paths, environment awareness through literacy campaigns, and trainings other than the schemes we discussed in the Chapter so far. Around 64% of the tribal households got assistance for field crops, 67% got assistance under agro-forestry and 79% participated in environmental literacy campaigns.

xxviii. The household survey also collected suggestions of people for the improvement of AHADS activities; around 32% of the people are of the opinion that AHADS activities are to be continued. Tribal households wanted for more road connectivity to hamlets (44%) and asked for assistance for side wall construction (14%). Non-tribal households are in need of assistance for

irrigation support (39%) and marketing support (17%) from AHADS initiatives.

Sustainability of People's Institutions

As discussed earlier, a total of 644 PIs are created under the AHADS' initiative with 7163 members in Executive Committees. Even though the initiative and enthusiasm including the level of participation of various sections of the society in the PIs was quite high in the beginning, the activity status has slowly declined over the years. The Sample Survey also focused on the sustainability of the PIs created under the AHADS and the major findings in this regard are the following.

xxix. The active members in various PIs averaged 84%. The participation was as low as 63% among TKS members and was high among OVS members (96%).

xxx. The sample survey revealed that 53% of the EC members belong to the very active age group of 18-35 years with a maximum of 58-59% for JFMCs and OVSs.

xxxi. The educational background of the EC members shows that a staggering 25% are without any formal education; even then, their participation and the number of EC meetings convened are very high.

xxxii. Educational background is one of the indicators of the activity status; 80% of the EC Members are laborers, either in farm sector or in the rural informal sector. Among the EC members of OVSs, 89% are laborers.

xxxiii. The educational background and activity status of the EC members together decide the income status. The sample survey discloses that 69% of the EC members have monthly income status of Rs.1500 and above.

xxxiv. In the sample survey it was found that a good number of IGAG schemes are coming under vegetable farming and plant nursery (22% each) followed by banana, tapioca and paddy cultivation (14% each); Average actual expenditure per scheme ranged between Rs. 2667 and Rs. 75,000. The survey revealed that almost all schemes of IGAGs are able to earn profits within the range of 33% to 90%.

xxxv. Regarding the ongoing schemes of IGAGs, average estimated cost of the schemes ranged between Rs. 3000 to Rs.65,000. However, the average actual expenditure, so far, was between 47% and 100%.

xxxvi. The performance of major schemes implemented by OVS (other than house construction under THDP) shows that side wall protection and landscaping (19%), check dams and village roads (14% each) dominate the OVS activities. Average estimated cost of the schemes ranged between Rs. 100,000 to Rs.79, 89,125. Among the ongoing schemes 38% are house construction schemes with an actual expenditure of 39% (so far) of the outlays. Average number of beneficiaries ranged between 21and 49 people.

xxxvii. Major schemes implemented by the JFMCs include fire-lines, trenches, soil mulching, weeding and agro-forestry. The average estimated cost of each scheme was Rs. 7,96,008; however the actual expenditure was only 61% of the outlay. As regards the ongoing schemes the expenditure so far ranged between 51% for the fire line work to 62% for forestry activities.

xxxviii. Check dams, rain water harvesting systems and tanks contributed 24% of the schemes implemented by UAs followed by farm nurseries and other agronomic activities (16% each). Average estimated costs ranged between Rs. 26,600 to Rs. 3, 92,600. The average actual expenditure as a percentage of estimate was as high as 100% for compost schemes and farms and a lowest of 68% for sidewall/ soil conservation schemes. The average number of beneficiaries ranged between 6 people for biogas schemes to 152 for check dams and other drinking water projects. We can observe a negative correlation between the size of the beneficiaries and the average expenditure as a percentage of the estimates.

xxxix. Analysis of the ongoing schemes implemented by the UAs reveal that the average estimates are higher for irrigation schemes (Rs. 14,81,500) and low for sericulture schemes (Rs.30,000). Average expenditure as a percentage of the estimates ranged between 49% and 80% (so far).

xl. Prohibition of liquor consumption in the hamlets (48%), actions against domestic violence (16%), control of drugs addiction including Ganja and literacy campaigns (12% each) constitute the major activities of the TKSs.

xli. Among the five PIs created by AHADS, the participation and cooperation of community to the PIs was reported to be high for IGAGs (63%). On an average 90% of the PIs (who are surveyed) reported for excellent/ good remark on the co-operation from the community; however, the cooperation from the AHADS was 100% (excellent/ good) for all the PIs surveyed.

xlii. The level of cooperation of AHADS towards the PIs varies from one institution to another. For instance, public awareness classes (72%) was a major source of assistance from AHADS to TKSs, where as for IGAGs it was trainings (31%), for OVSs and JFMCs technical advices (corresponding weightages include 36% and 43% respectively), and for UAs' financial/ technical support.

The major challenges facing the PIs, as reported from the Sample Survey are as given under.

i. The TKSs have dissuaded tribal people from production and consumption of illegal liquor, however, lack of cooperation from the Police/ Excise departments (50%) and community members (34%) are highlighted in the sample survey as the major challenges facing the TKSs.

ii. Income generating activities of any people's initiatives are in need of financial and marketing support. In the case of IGAGs also the facts are not different; higher interest rate of bank loans (44%) was the major challenge reported for the IGAGs.

iii. Lack of availability of skilled labour and materials (20% weightage each) constituted the important factors that hinder the smooth function of the OVSs.

iv. The JFMCs' major challenges include the threats attached to the anticipated conclusion of activities of AHADS and poor support of the community in most cases.

v. Lack of cooperation from the beneficiary community is the major challenge facing the UAs.

Conclusion

The important elements of the AHADS' Model of Eco-restoration and Sustainable livelihood can be concluded as follows.

viii. Watershed as a unit of planning: As the main objective of AHADS is eco-restoration, the unit identified for planning and implementation of the Project activities has been watershed. There are 15 main watersheds and 146 micro-watersheds in the Project area. The main watersheds have been identified as Development Units.

ix. Implementation through People's Institutions: AHADS formed various organizations of local people to plan and implement project activities in a participatory manner.

x. Proper representation of women and tribal people in People's Institutions: In order to ensure proper representation of women and weaker sections including tribal communities in various PIs, it was made mandatory that all the PIs should have proper representation of all sections of the community.

xi. Employment Generation for local people: AHADS employed local people in different activities taken up under the Project. Shortage of labour has hindered different activities like nursery rising and plantation as well as THDP construction works, especially when the operations coincide with the farm activities during the Monsoon seasons. This strategy has slowed down the pace of implementation but has increased the availability of employment and wage rates to the local people. As of 2008 figures, the Project has generated more than 4.38 million man days of employment. These opportunities, in an area known for poverty and unemployment, have favorably influenced the socio-economic progress of Attappady. The widespread tendency of the people of Attappady, mainly the tribal communities, to migrate to Kerala and Tamil Nadu plains in search of employment has come down considerably since the advent of the project implementation.

xii. Income Generation: Simultaneously with employment generation in eco-restoration and hamlets development activities, AHADS has also been promoting self employment to generate income for the local people, especially tribals. This is done largely through formation of Self Help Groups (SHGs). This strategy increased the involvement and income of local people, particularly the landless, women and tribal people.

xiii. Multi-disciplinary approach: The initial strategy adopted for project implementation was to take up different Development Units (DUs) one by one or in small groups, which has reduced the overall pace of implementation. This strategy was therefore changed to simultaneous implementation in all DUs with one multi-disciplinary team for each DU, which has increased the over all pace of project implementation.

xiv. Total Hamlet Development: This progarmme aims to address total hamlet development plan for tribal areas, which envisages comprehensive development by incorporating the social, cultural and individual needs through participatory approaches. Housing and landscaping, accessibility, drinking water supply, environmental hygiene and sanitation, sustainable farming systems and livelihood generation are the major components of the programme.

From the foregone discussion it could be seen that livelihood provisioning under the AHADS' package was much weaker than the other segments. Targeted food and health relief is critical and should be combined with production intervention. Community focused interventions are necessary for chronically vulnerable populations (eg. Mother and child health programmes) to allow for the provisioning activities to be taken over by the community on a sustainable manner.

Sustainable livelihood, enriched environment, improved quality of life and human values, which are all included under the AHADS package; however, we can see weak links in certain elements of AHADS' sustainable livelihood strategy.

While promoting various development programs, the primary goal was to help the targeted families to come out of poverty, which assumes livelihood security. But, generation of substantial incomes through multi-disciplinary programmes was too weak

under the AHADS' package. Women and tribal empowerment and participation is an important land mark of the AHADS' model including environmental literacy initiatives. These are critical for the sustainable livelihood of the rural poor.

The adaptive management method was not practically fool proof in the case of AHADS.

AHADS has identified hamlet as a unit of development in place of family, as followed by BAIF. Improvements in quality of life through various development activities including health, literacy and moral development (activities of TKSs) are all significant steps in the right direction towards sustainable livelihood. Eco-restoration package needs special mention in this regard.

Any development program without research back up is outdated; in the case of AHADS model training of field functionaries and farmers is indicative of effective transferring of technologies as well as human resources development.

One of the basic requisites for the sustainable livelihood approach is the formation of PIs to ensure transparency and public accountability. As regards AHADS, the five types of PIs created has helped to a great extent in motivating the members of the community, particularly the backward and shy members (especially women) to sustain their interest and take active involvement in various development initiatives. The fundamental weakness of AHADS' livelihood security model is its projects' inability to sustain living standards of rural poor once the Government funding and the institutional set up are closed.

It is obvious that the physical and financial progress of the Project has been slow in particular in the early years. The achievements regarding some specific activities like environmental improvement, human resources development and income generation have been abysmally low as compared to the targets. Even though the total budget outlay to AHADS since 1996-97 was a whopping Rs.42,122 lakhs, actual expenditure was only Rs.17,477 lakhs (42%). Till 2005, actual expenditure never reached 50% of the budgeted outlay; however, since 2005 it never went below 50%.

The achievements of social components in general are lower as compared to others, till the launching of THDP; on the other hand, if sufficient attention would have given for this component from the beginning, it has positively influenced the overall

impact at the grass root level. One of the major reasons for delay in implementation at the early stage was the initial phase-wise strategy of implementation and restructuring at the later stage.

The Model adopted under the Project combined together eco-restoration, participation, and livelihood with a focus on under privileged sections and implemented through PIs. This was a win-win situation for all. However, it could not develop measurable indicators for each components to assess the progress and monitoring mechanism was too week. The objectives of the Project are such that a longer time span is required for their realization.

The strategy of integrated micro-plans at micro-watersheds level required for eco-restoration has taken more time than envisaged due to lack of initial preparedness and a hit and trial approach followed in decision making. The strategy of creation and sustenance of democratic organizations of people required for sustained participation of people has also taken up its due time which was perhaps underestimated in the planning process. The income generating activities initiated did not have sufficient marketing tie-ups.

Even though AHADS maintained sound relationship with governmental and non-governmental organizations, its relation with such organizations within the Project area was not smooth, including the Peoples' Institutions. Lack of co-ordination between PIs created by AHADS and that of Panchayats missed the immense leverages and even the sustenance of such institutions created by AHADS.

Considering the credibility of AHADS and the importance of the Project to the area, AHADS can continue as an umbrella organization even after the Project has been completed so that it continues to provide support and guidance to different institutions of people created as part of the Project.

The major constraints and limitations of the Project include the following.

- The Project implementation primarily depends on local skill and manpower alone. During the peak agricultural seasons, availability of adequate labour becomes a constraint for implementation of the Project activities. As a result, the progress of the Project is negatively affected.

- The Project has a time limit up to March 2010 (later extended to August 2010); the insecure nature of employment makes experienced employees of AHADS to seek secured jobs elsewhere. The constant high out-turn of the staff adversely affected the progress of the Project.
- The inadequate availability of raw-materials in Attappady for civil constructions and the higher costs involved in transportation of materials to remote corners slows down the pace of the progress of the Project.
- The works are executed by PIs on estimates prepared in accordance with the Government approved rates. The demand equation in terms of skilled man power and raw-materials exceed local supply; resulting in constant increase in the cost of construction. Therefore, many PIs experienced losses in the construction works taken up by them, thus slowing down the pace of implementation.

Recommendations

As per the Government Decision, AHADS is going to be concluded by August 2010 (which was supposed to be wind up by March 2010 but extended later); from this angle the following suggestions are offered. Even though the recommendations need not have validity as the institution itself is going to be wind up, but, these recommendations will give an insight into such future initiatives.

i. The infrastructure created by AHADS needs to be maintained either by converting it into a training institution or as proposed by AHADS itself, it can be molded as the custodian of the eco-restoration project for Wayanad, if implemented.

ii. There is an urgent need for linking the PIs created by AHADS and the Local Governments' service delivery systems.

iii. All PIs created by AHADS are to be maintained for the common benefit of the local community and for which these are to be identified as the implementing agency of the Departmental and Local Governments' programmes at Attappady.

iv. The eco-restoration project, specifically agro-forestry and biomass development needs irrigation support at least in some cases. The Local Governments need to take follow up actions in these areas.

v. Marketing support for the agro-produce is an immediate need of the local people and urgent measures are required in this regard.

vi. The local people who got employment, both permanent and temporary, under the AHADS title are to be ensured job arrangements, through Local Governments, Govt. Departments and even through the NREGS.

vii. The watershed based development activities initiated under AHADS, including the eco-restoration activities can be maintained through the NREGS.

The Survey also recorded the suggestions offered by local people for the improvement of the PIs created under the AHADS, which are briefed as follows.

i. As regards TKSs, ensuring the co-operation of the Police/ Excise Officials (39%) followed by the support of the *Ooru* members (17%) are the apparent suggestions for the improvement of its activities.

ii. More or less correspond to the challenges faced, the IGAGs also reported for the need for funds at low interest rate (25%). The other major requirements emerged during the survey include need for insurance coverage (25%) and the support of Kudumbashree units.

iii. Implementation of agriculture projects (27%), involvement of Panchayats (13%), employment training (13%) and ensuring the continuance (13%) are the major requirements suggested for the sustenance of the OVSs.

iv. The continuation of forest conservation measures and maintenance of existing farm practices with a view on employment generation are the suggested orientations for the JFMCs, as reflected in the Sample Survey.

v. The Sample Survey comes out with some demanding suggestions for the enhancement of the performance of the UAs based on the watersheds. Ensuring financial viability (20%), inflection of interventions in the farm sector (20%), continuance of the existing projects (20%), etc are some of the imperative among them.

A broadened perspective emphasizing livelihood systems as key determinants of food and nutritional security reveals households as dynamic institutions, where power, control over resources, gender and culture all influence the households' ability to meet basic needs and negotiate survival. Establishing household livelihood security as AHADS' organizing framework has allowed it to improve programming through holistic diagnosis and design using multi-sectoral teams, as well as to improve measurement of impact at the household level. While this comprehensive view has made the analysis of food insecurity more complicated, it has enhanced the likelihood of identifying the multiple constraints facing households.

Although it is recognized that the livelihood security framework can still be improved, it nonetheless represents a significant advance from previous conceptual models of food and nutritional security. As experience in its application accumulates, further refinements will be forthcoming.

DEVELOPMENT INITIATIVES OF AHADS IN ATTAPPADY: A VISUAL SURVEY

(SELECTED PHOTOS)

Progress of Water Conservation Measures

THDP Activities in Progress

Renovation of kitchen in Kakkuppady LPS

Public awareness creation on controlling forest fire


Progress of THDP in Chemmannur hamlet


THDP: View from Chemmannur hamlet

AHADS: Agali, Palakkad

Waiting shed: Bhoothivazhi

AHADS: Attappady, Agali, Palakkad

Agro-forestry in progress

Eco-restoration in progress

Attappady: An ordinary day

Forest conservation measures

Chavadiyur bridge: a mile stone

A view of Chavadiyur bridge: AHADS initiative

Promotion of field crops

Support for fodder grass



Diverse view from Attappady: Reflection of AHADS interventions

Conserved forest: AHADS' success stories



A farm nursery in Olavankara *THDP in progress: A view from Swarnagatha*


A tribal hamlet: An illustration of AHADS success

Long-range view of a hamlet: THDP

An Attappady hamlet under THDP intervention

THDP in progress: A success story of AHADS initiative



Livelihood promotion of AHADS: Wide-ranging Activities in Attappady

Green Attappady: Bird's Eye View



Fencing *Chavadiyur RRMC* *Long view of forest*

Community resource centre at Thazhe Sambarcode

THDP at Thazhesambarcode

A view from a hamlet

Sambarcode hamlet

A river in Attappady

Green Attappady: A Success story of AHADS

A hamlet on transition

Villagers attending a PI's meeting

THDP in progress

Gender dimension of participatory development: A view from Attappady

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APPENDIX

Appendix -1
State Planning Board
Evaluation Division
Evaluation Study on AHADS (December 2009)

Household Survey Questionnaire

Name of Ooru: ----------Name of Community:----------
Name of Panchayat:----------

Part I: Household Level Basic Information

1.1 House No./ Name:
1.2 Name of Head of Household:
1.3 Sex of Head of Household:
1.4 Age of Head of Household:
1.5 Educational Status of Head of Household:
1.6 Employment Status of Head of Household:
1.7 Martial Status of Head of Household:
1.8 Family Information:

Sl. No.	Name of Family Members	Sex	Age	Martial Status	Educational Qualification	Employment Status	Monthly Income (Rs.)	Remarks
1 2 3 4 5 6 7 8 9								

1.9 House Type Details

Particulars	House Details
1. Year of Construction 2. Plinth Area (Sq. Feet) 3. Roof Type (Concrete/ Tiles/ Thatched/ Tin Sheet/ Others - Specify) 4. Walls Type (Bricks/ Cement Plastering/ Soil/ Tin Sheet/ Others – Specify) 5. Flooring (Soil/ Cement/ Tiles/ Others – Specify) 6. Number Of Rooms (Including Halls If Any) 7. Number Of Bed Rooms 8. Separate Kitchen (Yes/ No) 9. Electrified (Yes/ No) 10. Drinking Water Source (Own Wells/ Neighbors' Wells/ Pipe Water/ Ponds/ River/ Others – Specify) 11. Latrine Type	

12. Cooking Fuel Type (Fire Wood/ Gobar Gas/ Cooking Gas/ Electrified Owens/ Others – Specify)	

1.10 Household Level Asset Ownership Details

Asset Type	Ownership Details
i. Land (Cents) a) Agriculture Land (Cents) - Crops Cultivated * * * b) Waste Land (Cents) c) Private Forest (Cents) d) Non-Agriculture Land (Cents) *ii. Bank Deposits if any (Rs.)* *iii. Livestock (Numbers)* a) Cows/ Bullocks/ Buffaloes b) Sheep/ Goats c) Chickens/ Ducks d) Others if any (Specify) *iv. Household Durables (Numbers)* a) TV (Specify Monitor size) b) Radio/ Tape Recorder/ CD Player c) Refrigerator d) Telephone/ Mobile Phone e) Furniture (Tables/ Chairs/ Beds/ Others – Specify) v. Other Assets (Specify) a) Shops b)	

1.11 Household Health Care Status

Particulars	Household Status
1. Important diseases/ infectious diseases affected the family in last one year 2. Frequency of hospital visitations in last one year (Number of times) 3. Hospitals visited (PHC/ Taluk hospital/ Medical College/ Private Clinics/ Self Medication/ Others -Specify) 4. Nature of treatment (Allopathic/ Aurveda/ Homeo/ Inegencous/ Others -Specify) 5. Approximate Medical Expenditure in last one year (Rs.) 6. Medicines' Availability (Government Medical Stores/ Private Medical Stores/ Others –specify) 7. Vaccination for Adults (Specify) 8. Vaccination for children (Specify)	

1.12 Food Security Details (*Last One Week Approximations*)

Particulars	Type of Food Eaten	Level of Satisfaction (Enough/ Alright/ Insufficient/ No Food)
1. Break Fast 2. Lunch 3. Dinner 4. Tea/ Coffee/ Soft Drinks 5. Others – Specify		

1.13 Household Literacy Level

Particulars	Household Status
1. Number of literate family members (read and Write) 2. Number of illiterate family members 3. Number of children going to school 4. Number of children not going to school 5. Reason for not going to school 6. Distance (approximate) to the nearest School (KMs) i. LPS ii. UPS iii. High school iv. Higher secondary school 7. Reading materials frequently used i. News paper ii. Magazines iii. Weakly/ Monthly iv. Literary Books (Novels) v. Others – Specify 8. Library facility (Yes/ No)	

1.14 Household Entertainments

Particulars	Household Status
1. TV Set (Own TV/ Neighbor's TV/Colony TV/Others – Specify) 2. TV Cable connection/ Dish (Own/ Neighbor's / Colony/ Others – Specify) 3. TV programmes frequently watching (Serials/ Cinemas/ Sports / cultural/ News/ Others – Specify) 4. Average number of hours watching TV 5. Radio Programmes interested (Dramas/ News/ Music/ Others specify) 6. Last Movie watched in Theater (1 week back / 1 month back/ six months back/ one year back/ 2 years back/ Never) 7. Participation in cultural programmes (Yes/ No) 8. Other entertainments (Specify)	

1.15 Employment Status (Elders above 18 years of age) – Approximations for last one year

Name of Family member	Nature Of work (Agri./Labourer/ Govt. Employ)	No. of Days Per Week	No. of Hours per Day	Daily Wage (Rs)	Remarks

1.16Household Expenditure Statement (Monthly Average)

Particulars	Expenditure (Rs.)
i. Rice/ Wheat and other cereals – Specify ii. Vegetables – Others- Specify iii. Medicines –Specify iv. Travel Expenses v. Children's education vi. Clothing vii. House maintenance viii. Taxes (If any)- Specify ix. Others - Specify	

Part II: AHADS Support Based Information

2.1 Did you get assistance under THDP: Yes/ No
2.2 If the answer is Yes for 2.1 above, stage of house construction:
Completed/ Ongoing/ Not Started
2.3 Approximate estimate for the house construction (Rs):
2.4 Approximate expenditure for the house construction if completed (Rs):
2.5 Time period for the house construction: i. Date of starting:
ii. Date of ending:
2.6 Household's share in the construction (Man days of Labour cost) in Rs:
2.7 Do you think that the actual expenditure has escalated: Yes/ No
2.8 Present Status of the Houses: Excellent/ Good/ Not Up to the Expectation/ Bad
2.9 Is there any landscaping did in your house compound: Yes/ No
2.10 Approximate cost of the Landscaping (Rs.):
2.11 Do you think that the expenditure for landscaping has escalated: Yes/ No
2.12 Is there any drinking water supply schemes as part of THDP: Yes/ No
2.13 Approximate cost of the drinking water supply scheme (Rs.):
2.14 Do you think that the expenditure for drinking water scheme has escalated: Yes/ No
2.15 Number of Households using the drinking water supply scheme:
2.16 Major difficulties faced in the completion of THDP: (i)

(ii)
(iii)

2.17 Major Comments on the OVS: i.
ii.
iii.
iv.
v.

2.18 Other benefits received from the AHADS

Particulars	Nature of AHADS Assistance	Level of satisfaction (Excellent/ Good/ Not up to the expectation/ Bad)	Suggestions for Improvement
i. Field cropping (Area) ii. Agro-forestry (Area) iii. Days of Employment received (last one year) – Man days iv. Community Resource Centre v. Access Path to hamlet vi. Environmental literacy vii. Other benefits received -specify a) b) c)			

2.19 General View on AHADS

Area of Hierarchy	Level of Satisfaction (Excellent/ Good/ Not up to the expectation/ Bad)
i. Higher Level Officials ii. DU Level Coordinators iii. Field Officers iv. PI Members v. Neighbors	

Appendix - 2
State Planning Board
Evaluation Division
Evaluation Study on AHADS

People's Institutions (PIs) Survey Questionnaire

OVS/ JFMC/UA/TKA/IGAG
Name of Ooru: *Name of Panchayat:*

1. Name of the PI:
2. Date of Registration:
3. Name of the President:
4. Number of Members:
5. Number of Members actively participating:
6. Members' Details

Sl. No.	Name	Sex	Age	Educational Qualification	Employment Status	Monthly Income (Rs.)	Re-elected Members (Yes/ No)	Remarks
1 2 3 4 5 6 7 8 9 10 11 12								

7. Date of Last Election:
8. Date of Last Meeting Convened:
9. No. of Meetings convened in last 6 months:
10. Schemes implemented so far:

Sl. No.	Name of the Scheme	Nature of the Scheme	Estimated Cost (Rs.)	Actual Expenditure (Rs.)	No. of Beneficiaries	Remarks
1 2 3						

11. Ongoing Schemes:

Sl. No.	Name of the Scheme	Nature of the Scheme	Estimated Cost (Rs.)	Expenditure So far (Rs.)	No. of Beneficiaries	Remarks
1						
2						
3						

12. Employment created so far (Man Days):
13. Level of Decision Making: Unanimous/ Based on Majority/ Decisions without Discussion/ Differences of opinion and bias in decisions/ others- specify
14. Situations when the meeting was stopped in the middle (Yes/ No):
15. Reasons for stopping the meeting before the stipulated time:
16. Nature of Fund utilization: Unanimous/ Based on Majority/ Decisions without Discussion/ Differences of opinion and bias in decisions/ others- specify
17. Material arrangements for the schemes: Through contractor/ Direct purchase/ Local arrangements/ Other measures – specify
18. Participation and cooperation of the community: Excellent/ Good/ Not up to the expectation/ Bad
19. Level of political and external Pressures (Yes/ No):
20. Level of cooperation of the Local Bodies (Yes/ No):
21. If the answer is "Yes" for above, nature of cooperation: 1.
    2.
    3.
22. Level of Cooperation of the AHADS Officials: Excellent/ Good/ Not up to the expectation/ Bad
23. If the answer is Yes' for above, the level of cooperation: 1.
    2.
    3.
24. Major Challenges Faced: 1.
    2.
    3.

25. Suggestions for the Improvement: 1.
    2.
    3.