

## IV. RESULTS AND DISCUSSION

The findings pertaining to the study on “**Empowerment and Sustainable Development of Senguttaiyur Village Irular Tribe Women on Eco-based Well-being Strategies**” are discussed under the following broad headings:

**Phase I: Portrayal of the Cohort in the Settlement**

**Phase II: Conscientizing Women on Empowerment Trajectories in the Social Milieu**

**Phase III: Facilitating Connections and Capabilities Through Capacity Building**

**Phase IV: Empowerment Vs Well – being Endeavours Realized – a Vignette**

**Phase V: Status of Women Empowerment: Post Intervention**

### **Phase I. Portrayal of the Cohort in the Settlement**

To qualify as a settlement any group will have certain unique characteristics. Hence an enquiry was made and the findings are discussed under the following headings:

**A. Living Style/ Pattern Approach**

**B. Assay on Levels of Living of the Concerned Group**

**C. Appraisal of the Sample’s Empowerment Status**

#### **A. Living Style/ Pattern Approach**

The living style or pattern is the best mirror that can reflect the people and their characteristics. Irular settlement being a Tribal settlement signified as a **Particularly Vulnerable Tribal Group (PVTG)**, it was felt necessary to study them as a cohort. Cohort studies are so named because the members in the cohort are bound by a common characteristic, may it be the place of birth, common problems, etc. (Robertson and Williams, 2008). Hence this part of the study analyzed details pertaining to the following aspects:

**Settlement Characteristics**

**Political and Social participation**

**Portrayal of Women in the Settlement**

**Livelihood Approach to Decipher Resource Access**

#### **Settlement Characteristics**

The settlement in Senguttaiyur is a small village comprising of 67 families and a total population of 290 inclusive of more than 70 people who are in the unproductive ages. **Only 54 families (comprising 249 members) responded to participate in the survey. Others by**

virtue of their cohort- specific shyness, shunned to be a part of the programme. This is a major finding because even in this 21<sup>st</sup> Century and quite close to a District Headquarters there exists a group of population who wish to be invisible and obscure, of course is surprising. Evidently such a small cohort would manifest their uniqueness even in their day to day activities. With this in view the cohort was studied to understand their:

#### Nature of Living Style A.1.2.Livelihood Options

##### A.1.3. Perception on Social Concepts

**Nature of Living Style:** This aspect of the study discussed the details on:

#### Age of Marriage

##### Literacy Level

##### Food Habits

##### Health Status and Palliative Treatments

##### Other Practices and Tattoo Culture

**Age of Marriage:** Age of marriage is a concrete indicator of the development and cultural shift a cohort had imbibed during a particular period of time. Hence this aspect was analyzed and details are discussed under the following Table 5.

**Table 5: Age of Marriage of the Selected Sample**

Particulars	Age of Marriage	Per cent Responding
	(range in years)	(n=54)
Women (n=54)	<18	54
	18 – 24	41
	> 24	5
Men (n=54)	< 21	31
	21-27	43
	> 27	26

It was evident from the survey that more than one half of the women had been married away before they attained the prescribed age for marriage (18 years), while a good proportion of men also (31%) joined the clan, as the age recommended for men is 21 years. Evidently the reproductive health status of the women in the settlement would be questionable.

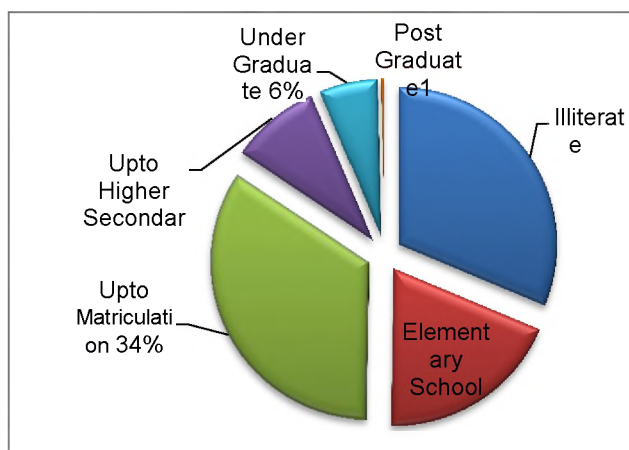
**Consanguineous marriages were quite common earlier, the ill effects of which they are aware of now** and majority of families have avoided such marriages. Yet instances of children with deformation born due to such marriages could be witnessed. Three female siblings have reported of born deformities because of consanguineous marriage of parents.



**Literacy Level:** The literacy status of the selected sample is tabulated below

**Table 6: Literacy Status of the Selected Sample**

Level of Education	Percent Responding (n=249)
Illiterate	31.3
Elementary School	18.9
Up to Matriculation	34.1
Up to Higher Secondary	9.2
Under Graduate	6.0
Post Graduate	0.4



**Figure 4 : Literacy Level of the Sample**

**Almost one third of the total sample was found to be illiterate;** though expected, was found to be disappointing. Nevertheless 34 per cent had studied up to Matriculation. Education beyond that was found to be sparse with just nine and seven per cent to have done up to Higher Secondary and tertiary level respectively. Evidently the status of the settlement on this indicator was visibly poor.

**Food Habits:** Free supply of rice through ration shops is one of the main reasons for the change in food habits of the Irular. Previously thick mass balls (kali) made from finger millet or pearl millet was consumed with gravy; but now kali is consumed by mixing with white rice.

**Box 6: Ragi Kali**

The millets are powdered for flour and stored for future use. Kali is made by mixing the flour with water and added to boiling water and cooked by stirring vigorously with a ladle until done and becomes a single mass. It is allowed to cool, made into balls and consumed with some gravy or raw onions.



**Ragi kali**

In recent years kali is mixed with cooked rice and consumed with gravy. *The free supply of rice in ration shops has changed their food pattern to include rice almost daily in their diet.* They cooked twice a day compulsorily; morning they cooked for both morning and lunch. Cooking/consuming fresh meal at night was adopted as a mandate.

Their diet primarily consisted of dishes made of rice, millets, red gram dhal, green gram, horse gram, greens, limited quantity of wheat and pulses – only one cereal and a pulse in a day. The cereals and pulses included in diet were repeated on a regular basis. Once in a while, tiffin items like Idli, Dosa or Upma featured in the menu. Preparation of such items being laborious, kali and rice as a filling meal for a long hard day's work and being easy and quick to cook were stated as reasons. Chicken was a common delicacy. While mutton found less preference, none of them consumed beef. Majority of them consumed eggs weekly once. Fish was consumed only when vendors visited the village. Eggs and meat was not consumed by more than 60 per cent of families during four months in a year which are considered to be auspicious months. **They did not consume brown sugar, only white sugar**; approximately three teaspoons of sugar added to a cup of black coffee/tea. **This finding is quite unique in that the settlement had changed in their culture oriented life style due to external influences.**

Visit to Karamadai Shandy (sandai) which is more than 20 Km away, weekly once or fortnightly by a family member ensured purchase of vegetables, fruits and essential grocery. Local vendors visited the settlement weekly twice to sell vegetables, snacks, biscuits and such other short eats. Seasonal fruits were bought by a few families from Karamadai Shandy. Delicious fruit bearing trees like papaya and mango could be found in the village. Snacks, bakery products, pickles, papads and jams were consumed occasionally. Sunflower cooking oil and groundnut oil was purchased from peddlers with large oil cans, whenever they visited at Rs.100/ per litre. Those who had coconut palm in their premises collected the fallen coconuts and milled them for oil at Tholampalayam. Trees being very tall and majority men lacking skills in tree climbing, major resource use was restricted to collection of fallen coconuts alone.

Though women were aware that consuming greens after sunset was not a healthy habit, many households consumed gravy made with green leafy vegetables at night. The frequency was higher as they could not cook greens in the morning due to lack of time.

**Availability of green leafy vegetables in abundance could also be attributed as a reason, a proof for their resourcefulness.**

They preferred traditional cooking methods of using fire wood rather than gas to save cost, and also preferred cooking in traditional boiling methods rather than the use of pressure cooker. Mixie and grinder were supplied free of cost as fringe benefits by the State Government. Mixie is used on an average weekly three to four times. For grinding masalas the women preferred only the manual method. It was surprising to observe absence of previous generation cooking utensils made of iron, brass and bronze. Instead **contemporary cooking utensils of steel, aluminium and plastic had caught their fancy. In many kitchens clay pots could also be seen. All this highlight the sample’s willingness to change.**

**Mean food intake of the selected sample :**

The mean food intake of the sample was found to be much less than adequate. Being on daily wages for many days together they were not able to meet the recommended daily allowances for nutrients through their poor

**Box 7 : Anganwadi**

Anganwadi is a type of rural child care and mother care center spread across India. They were started by the Indian government in 1975 as part of the Integrated Child Development Services program to combat child hunger and malnutrition.

diet. The noon-meal scheme, which provided free lunch to students in all Government schools, helped supplement basic nutrition requirements of tribe children. The presence of an **Anganwadi** (Box 7) also helped nourish children below five which provided comparatively balanced diet. Egg was provided twice a week. Pregnant and lactating women were also given supplementary foods.

**Health Status and Palliative Treatments:** Health is an important indicative speaking about the well – being of the concerned settlement. The following Table presents details on the general health status of the sample.

**Table 7: General Health Status of the Sample**

General Ailments	Percent Responding (n=54)
Body ache	28
Head ache	26
Leg Pain	22
Cold/Fever	11
Teeth/Oral Hygiene	15
Vision problem	11
Blood Pressure	09

For many of the general ailments it was multiple responses. None of them complained of any debilitating ailments except nine per cent who endured high blood pressure. Treatment took revealed 70 per cent to **prefer allopathy**. Nearly 50 per cent of the respondents mentioned that they visited Bethany Hospital located 16 km away from the village. The Anganwadi stocked medicines for ailments like cold, fever, cough, diarrhea, antiseptic ointments, etc. While 13 per cent went in for home remedies, an equal proportion showed an interest in Siddha, and some of them, sometimes believed in religious and/or satanic cult. **Switching over to allopathy also projects their trend to change**. Cases of children with malnutrition, anemia, skin and respiratory problems were reported during the study period.

- **Palliative treatments (culturally mediated benefits):** All of them were aware of certain home level remedies for many of the common ailments. It was very heartening to note that many of them were of herbal origin. Herbs were either consumed raw/processed or applied (internal or external use) for relief from the ailments

**Table 8: Home Remedies for Common Ailments**

Ailment	Palliative	Nature of use
Cold	<i>Solanum trilobatum</i> (Thoodhuvalai)	Juice of leaves taken early in the morning daily until cured
Cough and cold	<i>Adhatoda vasica</i> (Adathodai)	Leaves are dried, powdered and taken with water
Fever	<i>Chinese chaste tree</i> (Notchi) leaves	Leaves are boiled in water and the vapour is inhaled two or three times a day
Headache	<i>Alibizia amara</i> (Arappu)	Leaf powder is mixed with tamarind paste and applied on head and washed after an hour's time. Gives relief to headache
Diabetes	<i>Gymnema sylvestre</i> (Sarkaraikolli)	Decoction of leaves boiled in water drunk daily helps control blood glucose levels
Snake Bite	<i>Alibizia amara</i> (Arappu)	Juice extracted from flower mixed with black pepper powder and sugar is used for oral intake
Diseases of urinary system and constipation.	<i>Senna auriculata</i> (Avaramsenna)	The root is used in decoctions for curing diseases of urinary system, constipation and helps control insulin levels.

**Other Practices and Tattoo Culture:** Ninety per cent of sample women were used to chewing betel leaves. They claim to chew them as it helps not only in fighting bad breath but also reduce fatigue while engaging in manual tasks. Twelve per cent also had the habit of chewing tobacco

- **Tattoos: Younger generation does not have Tattoos.** Previous generation reported that tattooing was a very painful process and pain lasted more than two days. A paste made from grinding turmeric with leaves of *Phaseolus lunatus* (Avarai leaves) was applied on the

tattoo to heal quickly. There was a belief that the colour is more pronounced when they are tattooed during pregnancy and the process will be less painful if the tattooer sings special songs for the occasion. The reason behind tattoos is the belief that when they die only the tattoo goes with the body till the end.



Tattoos



Personal Hygiene

- **Personal Hygiene: More than 70 per cent of the samples were found not to be aware of feet, nail, teeth (oral) or other personal hygiene concepts.** Further chewing beetle leaves/tobacco as regular habit has caused stained teeth with cavities Majority were **unaware of the benefits of drinking boiled and filtered water.** They were not in the habit of bathing daily, but now they are changing to the better; started using bathing soaps, previously brick or coconut fibre was used as body scrub.
- **Toileting Facilities:** Open defecation was the practice in the settlement. Regarding open defecation samples showed mixed feelings with one half detesting the practice and craving for a toilet, whereas the other half feeling it was not unhealthy and felt this a lot easier. **During the period of survey none of the houses had toilet facilities**

#### Livelihood options

This aspect delineates the livelihood options the settlement had to survive during times of technological advancements. Hence this part of the study analyzed the ensuing aspects related to livelihood options.

#### Nature of Livelihood Options Taken up

#### Land Owned and Crops Grown

**Nature of Livelihood Options Taken up:** This aspect of the study is explained under Table (9).

**Only 65 per cent of the total sample (among 249) were found to be earning for a living.** Farming in small patches of forest land was reported by majority of samples to have been taken up as their livelihood option (Box 8). The data published by Dhevi and Mani

(2014) support this statement. Both semi - skilled and unskilled jobs were the other major occupational avenues open to them.

**Table 9: Nature of livelihood Options Taken up**

<b>Livelihood options</b>	<b>Per cent Responding (n=162)</b>
Farming in Forest Land	27.8
Cattle Rearing	16.7
Farm labour	11.7
MGNRES (100 days)	10.5
Others	10.5
Mason, Carpenter,	6.8
Brick Kiln Worker	6.2
Construction work	4.9
Govt. Employee	3.1
Driver	1.9

Vocations in the **unorganized sector** surfaced in a majority of 90- 95 per cent of the responses, highlighting that this factor has contributed to their **low subsistence living**.

The meager daily wages earned by the sample could possibly satisfy not even their basic needs. These facts prove that the earning potentials of the sample settlement are pathetically low. It can be concluded that they do not **enjoy job security, stable income and hence were habituated (pushed) to subsistence living**. **Food security** is the state of having reliable access to a sufficient quantity of affordable, nutritious food. **Food security is a measure of the availability of food and individuals' accessibility to it, where accessibility includes affordability**. **From the findings of the study it is proved that the samples were thriving literally on subsistence living and definitely lacked the rightful food security**.

**Land Owned and Crops Grown:** Among the families settled in Senguttaiyur village only 27.8 per cent was found to resort to farming in the land accessed by them. This is a common practice among all settlements. They just claim ownership to small patches of land and do farming just to cater to the needs of their family. Lack of rains to aid in fertile irrigation and fear of elephants damaging the crop, prevented them farming on a larger scale. Hence 27.8 per cent alone reported to have taken up **horticultural activities** in their patches of land.

**Box 8 : Subsistence Crops**

Those crops grown primarily to be consumed by the farmer and his family are called subsistence crops and is applicable when the farmers prefer to grow their own crop for sustenance and not for marketing. **Horticultural activities** encompass cultivation, processing, and sale of fruits, nuts, vegetables, ornamental plants, and flowers as well as many additional services. In contrast to agriculture, horticulture does not include large-scale crop production (Shyr and Reily, 2017).

Horticulture primarily differs from agriculture in two ways. First, it generally encompasses a smaller scale of cultivation, using small plots of mixed crops rather than large fields of single crops. Secondly, they generally include a wide variety of crops, even including fruit trees with ground crops. Agricultural cultivations however as a rule focus on one primary crop (Arteca,2015).(<http://www.livelihoods.net.in/sites/default/files/pdf/Tamarind.pdf>);[https://en.wikipedia.org/w\\*iki/Horticulture](https://en.wikipedia.org/w*iki/Horticulture)

Crops cultivated in forest land for local consumption included cereals, millets, legumes/pulses, fruit crop, etc. - Pearl millet, Finger millet, Jowar, Horse Gram, Green gram, Cowpea, Foxtail Millet (Bajra), Sesame, Barnyard millet (KuthiraiVaali), Little Millet (Saamai), and vegetables like – Tomato, Brinjal, Greens, Ladies finger, Bitter gourd, Pumpkin, Papaya and Mango - were grown.

#### **Perception on Social Concepts**

**Opinion on social constraints like love marriage and widow remarriage still was found to be strong**, as 59 per cent of the women stated that they do not encourage love marriage and 70 per cent did not entertain the idea of widow remarriage. A good 78 per cent of the tribe had gradually understood the disadvantage of early marriage (less than 18 years) for girls, while the rest still believed that this custom is agreeable. Though the tribes do not practice demanding dowry during marriage, 26 per cent was for accepting gifts from bride's house. But a good 74 per cent resented the practice. **A slight inclination to change their social concepts could be witnessed, despite a strong hold on such systems.**

#### **Political and Social participation**

Other major aspects which can project the sample's status is their active participation in political and social activities. Hence this part of the study is analyzed under:

**Belief in Religion:** Almost 20 per cent of the settlement was following Christianity in recent times but majority 80 per cent of the population belonged to Hindu religion. Ganapathy, Mariamman, Ranganathar, Muniappan and Jesus Christ were the deities worshipped, a fact of deviation found from their native culture. Pongal was the main festival celebrated when the houses were white washed, and the other celebrations included Thai Poosam, Diwali and Christmas. **EllaiSaamy(the tribe's own Deity)** was a deity at the foothills, which was worshipped by the Irular on special occasions for family functions.

**Political Involvement:** Majority of the population, more than 60 per cent exercised their voting rights; they cast their votes at the polling booth in Melpavipudur located at a distance of three km from Senguttaiyur (Senkuttai). None of the settlement people were involved in other active activities related to politics

**Participation in Social Activities:** Ten per cent of the samples were members of a Self Help Group formed earlier which included members from neighbouring village as well, but the group could not sustain to function constructively and was subsequently dissolved. They

were never exposed to any social gatherings other than family functions like marriage, puberty function etc. They had no access to social networking, though a negligible proportion, by virtue of the livelihood option accepted like construction work, part time job workers in Government offices, had a mobile phone for communication. As entertainment facilities were also located far away and the access being difficult, the samples were found to be socially less empowered.

**Portrayal of Women in the Settlement:** Women constitute an essential component of any settlement. They also reflect the extent of development the settlement had achieved by virtue of marking their presence in all major developmental indicators. Hence this part of the study analyzes the **women shakthi** scenario in the selected settlement on the following lines:

### **Socio- demographic Status of Women in the Settlement**

#### **Details on Confinement and Birthing**

#### **Resource Management Behaviour**

#### **Women - related Idiosyncrasies**

#### **Socio- demographic Status of Women**

The aspects discussed under this heading address their status in sub-domains of their empowerment dimensions. Therefore an in - depth study was felt necessary, the findings of which are discussed under the following headings:

#### **Age Group of the Women**

#### **Literacy Level of the Women**

#### **Marital Status of the Women**

#### **Health Status of the Women**

#### **Livelihood Options Taken up by the Sample Women**

**Age Group of the Women:** The following Table illustrates the age group of the selected sample.

**Table 10 : Age Group of the Sample**

Age Group (Range in years)	Percent Responding (n=54)
6 – 25	9.3
26 – 35	25.9
<b>36 – 45</b>	<b>33.3</b>
46 – 55	13
56 – 65	11.1
> 65	7.4

From among the 54 women who participated in the study, almost 60 per cent belonged to the productive age range between 26 – 45 years, though maximum representation was in the 36 – 45 years range. Almost 19 per cent fell in the senior citizen range. Joshi (1999) has referred to **the 15-59 age groups as the economic active age group**. Hence it can be concluded that approximately 80 per cent of the women population belonged to the economic active age group.

**Literacy Level of the Women :** As this is an important indicator contributing to determine their status of empowerment, the details on the same were enquired of and the findings are tabulated below

**Table 11 : Literacy Level of the Settlement Women**

Particulars	Percent Responding ( n=54)
<b>Illiterate</b>	<b>55.5</b>
Primary School	20.3
Secondary School	18.7
Higher Secondary School	5.5

It was alarming to record **illiterates to predominate (55.5 %) among the sample**. It is no wonder that **they contribute to 38 per cent of the illiterates among the total population (54 families and 249 members)**. Similarly **15.48 per cent contributed to the total population statistic (67 families)**. Nevertheless, it was satisfactory to note at least the younger generation to have undergone schooling, though at different levels. **Evidently literacy wise the status of women in the settlement was found to be very poor.**

**Marital Status of the Women:** Though only married women were chosen for the study, the details on their present marital status had to be studied to locate them in the empowerment strata. The details are as given under the following table.

**Table 12: Marital Status of the Selected Women**

Particulars of women in the settlement		Per cent Responding (n=54)
Marital Status	Living with spouse	72
	Widowed	28
Age of marriage (range in years)	<b>Below 18</b>	<b>54</b>
	18 – 24	41
	Above 24	5
Age difference between husband and wife	Below 5	41
	05 – 10	44
	Above 10	15

All samples reported to have been married among whom 72 per cent were found to be living with spouse whereas the other 28 per cent (approximately one-third of the sample) were widowed. Much against Government stipulations that girls should be married away at 18 or above years of age more than one half was found to have been married away before 18 years. Further the Table indicates that nearly 95 per cent of women were married before the age of 24. The age difference between the man and the wife at the time of marriage was found to be in the range between 5-10 years in 44 per cent of the families and less than 5 years in 41 per cent of the samples. These factors reflect how the female population was forced to enter into matrimony at a younger age and how they were subjected to take up the responsibility of home making, also how almost one-third of the women were thrust with the onus of heading the family as widowed women.

**Health Status of the Women:** Only 26 women out of the sample agreed to oblige to undergo measurement for body weight and stature (height) to enable calculation of the BMI which is a true indicator of one's health status. The findings are therefore presented under the following Table. The samples are classified for their BMI category referring their values to the Nutritional status based on the WHO and Asian Criteria values

**Table 13: BMI Status of the Samples**

Nutritional Status	WHO criteria BMI cut off kg/m <sup>2</sup>	Per cent responding	Asian Criteria BMI cut off kg/m <sup>2</sup>	Percent Responding (n=26)
Underweight	<18.5	46.15	<18.5	46.15
Normal	18.5 – 24.9	46.15	18.5 – 22.9	34.60
Overweight	25 - 29.9	07.70	23 – 24.9	19.20

Internationally a BMI over 25 kg/m<sup>2</sup> is considered overweight. Due to genetic tendency of Indians towards abdominal obesity and its associated risks of related lifestyle diseases, the Ministry of Health and Family Welfare along with ICMR released updated guidelines (in 2012) that a BMI over 23 kg/m<sup>2</sup> is considered overweight.

Either way the study pointed to a maximum of 46.15 per cent of the sample to be underweight, followed by 36.60 per cent who were normal. At the same time 19.20 per cent were found to be overweight according to Asian standards. It is clear that almost one half of the samples were not physiologically fit.

**Livelihood Options Taken up by the Sample:** The ensuing table portrays the livelihood options taken up by the selected women.

**Table 14: Livelihood Options Taken up by the Sample Women**

Occupation	Per cent Responding (n=42)
Farming in Forest Land	42.9
MGNRES 100 days	21.4
Cattle rearing	16.6
Farm Labour	7.14
Brick Kiln Worker	7.14
Govt. Employee	2.38
Construction work	2.38

The study primarily revealed only 77.77 per cent (42 out of 54) to have preferred to earn for a living. Among them farming in forest land (42.9 %) was a major livelihood activity taken up. **The MGNRES Scheme by the Central Government was a boon for 21.4 per**

**cent who had an assured income at least for those specified 100 days.** All others were engaged in manually fatiguing tasks which were all the more in the unorganized sector. **None of them had an assured source of income nor did they enjoy job security. This also proves that the samples lived on a hand to mouth subsistence living.**

**Working Days in a Month:** The tribes are used to keep changing their occupation depending on the availability of job, climatic conditions, health conditions and availability of government schemes for daily wages. The following table gives details on their active gainful working days reported during the period of study.

**Table 15 : Working Days in a Month during the Period of Study**

Working days per month (n)	Percent Responding (n = 42)	Working hours per day (n)	Percent Responding (n = 42)
>20	62	<5	30
10-20	28	5-8	58
<10	10	>8	13

A majority of 62 per cent of the samples took up jobs for more than 20 days in a month, while ten per cent were able to get one only for less than ten days. Similarly when 30 per cent worked only below five hours a day, 13 per cent worked for more than the stipulated eight hour schedule. The concepts of job insecurity and wage earning as contract or casual labourers are quite visible from the findings.

**Other Livelihood Options:** The study brought to light that during seasons and lean periods the samples relied on collection, processing and sale of **Minor Forest Produce (MFP)**, accessible from the reserve forest area like arappu and tamarind and livestock rearing (cattle, goat etc.), broom making and the like (Plate 3). Collection and processing of MFP being laborious, drudgery, fatiguing and one that does not fetch the appropriate returns along

with middlemen menace, those activities were taken up only in a limited measure. Hence they could not give a correct picture of their earnings from these livelihood options. Yet it was found that they were contributing from ten to 40 per cent to the family income from their earnings by engaging in such livelihood options.

According to Aerthayil (2008) **socio economic characteristics are literacy rate, education at school level, unemployment and sex ratio. He had reported that women mostly lag behind men in these aspects. This study proves his statement**



**Plate 3. Eco-based Livelihood options Chosen**

#### **Details on Confinement and Birthing**

This is an important characteristic of a settlement which can help to find out the extent of mobility allowed to the womenfolk of the village. Hence this part of the study is analyzed under the following headings:

#### **Confinement Related Details**

#### **Birthing and Postpartum Confinement**

**Confinement Related Details:** Confinement is defined as the condition of being in childbirth. The details pertaining to this group of the tribal sample was enquired of and the details are tabulated below.

**Table 16 : Confinement Related Details**

Particulars		Per cent Responding
Age of first delivery	Below 18	34
	18 – 24	58
	Above 24	8
Antenatal Care	No	70
Nature of Delivery	Normal	90
	Caesarean	10
Place of Delivery	Home	77
	Hospital	23
Who assisted in Delivery	Mother	56
	Mother-in-Law	6
	Grandmother	8
	Doctor	22
	Others	8
Duration of Breast Feeding (in years)	Below 2	20
	2 – 3	28
	3-4	32
	5	20

It was very agonizing to record a good **34 per cent** to have had their first delivery **before 18 years** of age (an age as per Government rules does not even qualify for getting married), while almost 60 per cent after 18 years. Nevertheless, all had had their first confinement well before 24 years. Another feature was 70 per cent reporting not to have had any antenatal care. Assistance in delivery was mainly the mother (56%) for those who had had their delivery at home or any other elderly woman (18%). Around 22 per cent had had their confinement in hospitals assisted by medical personnel. It was indeed gratifying to record 90 per cent of the samples to have had normal delivery. It was surprising to record the duration of their lactation period. Duration of lactation exceeded two years for 80 per cent of the samples. The women breast feeding beyond four years belonged to the age group of above 45 years. (Young women in the settlement breast fed only for a shorter duration). Duration of lactation, they believed could prevent their pregnancy prospects. They agreed that this belief has also been successful. **Almost a half of the samples breastfed for three to five years, a characteristic, unique to the chosen tribal**

**Birth and Postpartum Confinement:** The following Table presents details on the same.

**Table 17: Confinement Related Details on Postnatal Care and Family Planning**

Particulars		Details	Percent Responding (n=54)
Postnatal Care		No	76
Caretaker	Mother		66
	Mother in law		20
	Sister in law		6
	Others		8
Miscarriage, still birth		No	90
		Yes	10
Family Planning	Wife	Yes	35
		No	65
	Husband	Vasectomy	6
Age of Menopause		Below 40	9.3
		40-50	24.1
		Above 50	9.3
		Menstruating	57.4

In the previous generation delivery of baby was normal in the house without any need for sophisticated instruments or trained medical professionals. Home deliveries assisted by other women were the practice. Recent trends see more cases of caesarian cases, the samples reported. First feed for baby was given on the day of birth. The mother and baby slept outside the house in the verandah for three months. A fire was lit, which burned till around 3 a.m., to keep mother and child warm, sort of **postpartum confinement**. For 66 per cent of the samples their mothers had helped after delivery (postpartum) and was taken care of well. It was heartening to record that the samples enjoyed social capital on this score. **Factors where the samples were found to show awareness were - adopting family planning (32 % women and 6 % of men), institutional care for delivery (22%), approaching hospitals for delivery (10%) and the like.** More than 50 per cent were still in the productive age and menstruating. The age of onset of menopause differed with 24 per cent to have experienced late between 40 to 50 years and 9.3 per cent each reporting either before 40 or after 50 years.

**Resource Management Behaviour:** This part of the study analyzed the managerial acumen of the selected sample in managing their households and are dealt under the following headings:

**Values and Goals Possessed**

**Money Management Practices**

**Time Management Practices**

**Energy Management Practices**

**Values and Goals Possessed:** Perseverance, honesty, truthfulness and hard work were the major values cherished by the samples. Enquiry into the goals cherished revealed easy access to medical facilities (74%), fulfillment of basic facilities (66%), better housing conditions (56%) and concrete job opportunities (48%) as highly desired. It was evident **that they were highly desirous to get access even to their basic living facilities/ amenities, which depressingly was found to be lacking and then to improve their Quality of Living (QL) status** in the community.

**Money Management Practices:** Very few participants (less than 10%) agreed that **the monthly income earned was adequate for their living**. Others reported to be managing by cutting down expenses (53%), borrowing (26%) and postponing expenses (21%). All the samples **expressed their need and requirement to engage in some subsidiary occupation to augment their income**

**Time Management Practices:** Only 22 per cent practiced planning their time. Irrespective of their occupational status all of them experienced peak loads both in the morning as well as evening. A majority of 88 per cent of the samples worked less than eight hours a day, while 10 per cent were found to toil for more than 10 hours and were left with little rest time.

**Energy Management Practices and Recreation:** Only 38 per cent of the women were found to be aware of work simplification practices. The samples enjoyed the benefits of using labour saving devices like mixer and grinder obtained as freebies from the State Government. **The settlement enjoyed total electrification; therefore those who could afford used the electrical appliances to conserve their energy**. Likewise the State Government also had supplied **gas stoves free of cost**. If at all they could afford the cost of cylinders they found it easier to cook than to struggle with fuel wood fed cooking facilities. Government initiative to **replace empty cylinders periodically is what they expect citing their poor economic status**.

The measures adopted for alleviating fatigue were sitting in common area and taking rest, chatting with other women, watching television, sleeping, etc. The women generally slept around 11 p.m. (23 hours) and woke up around 6 a.m.

Many residents (more than 30%) possessed two wheelers and mobile phones for easy transport and communication.

Majority of the samples detested watching television programmes mainly because they couldn't afford the monthly stipulated charges of Rs.75/- which they had to pay to have the Tamil Nadu cable network connection. A few women viewed TV soaps or regional movies. None watched News channels. They never had been to the theatres to watch movies. Recreational activities hence were found to be totally absent. These factors also attribute to their ignorance level and lack of awareness on scenario external to their limits.

#### **Women related Idiosyncrasies**

Certain idiosyncrasies which still persisted and which may have had an impact on the physical, psychological and emotional well-being of the samples is presented below:

- **Puberty:** Menstrual cycle normally commenced between 9-12 years of age. For seven days the girl was left alone in a small cubicle made of palm leaves. After seven days the girl has to wake up before dawn and bathe in the river or pond before anyone sees her. She was then left in isolation for three months, hence should not enter the house. Therefore she was forced to sit and sleep in the outside verandah of the house or in a separate shack, until the puberty function.

The puberty function (Exhibit 2) is a grand affair and majority of families in the settlement took heavy loans for the purpose. The age attending rituals were performed inviting hundreds of guests and relatives for a feast. It might take several weeks or even many months to arrange funds for the occasion. Until the ceremony is done no one visits the house of the girl, eats or drinks even water from the house.

- **Menstrual Cycle:** During monthly menstrual cycle the girls stay 3-6 days outside the house, and are not allowed to touch anyone. They are provided with a separate plate, tumbler, bed sheets and towel. The same ritual is followed for all menstruating women in the house. During such periods the other women in the house or the men take care of cooking for the family. This habit is in vogue till date in majority of the houses. A change witnessed in recent days was that in many of the families they stay out only during menstrual periods for three days and - mother and daughter - both the generations had started using **Sanitary Napkins** during menstrual periods. Thanks to the prospects for their urban visits and media (in TV) for the awareness generation and the supply of the same through the local anganwadi.



**Exhibit : 2 Puberty functions and mother and new born baby outside house**

- **Delivery and Confinement:** *Postpartum confinement* (Exhibit 2) was still practiced in the selected settlement and irrespective of age and generation gap, women were found to follow them strictly. (Box 9).

**Box 9 : Postpartum Confinement**

Postpartum confinement refers to a traditional practice following childbirth. For those who practice, it typically begins immediately after the birth and it lasts for a culturally variable length: for one month or 30 days, up to 40 days, two months or 100 days. This postnatal recuperation can include "traditional health beliefs, taboos, rituals, and prescriptions. In some cultures it may be connected to taboos concerning impurity after childbirth ([https://en.wikipedia.org/wiki/Postpartum\\_confinement](https://en.wikipedia.org/wiki/Postpartum_confinement))

A concoction with tamarind called Rasam which was spiced with garlic, tomato, red chilli, coriander seeds, jeera, palm jaggery (karupatti), dry ginger and pepper was given for the mother. Tamarind was mashed with stone, made into balls and given to mother to increase milk secretion. Babies were given finger millet porridge after three months

**Human Capital Support Status:** A World Bank report defines Human capital to consist of the knowledge, skills, and health that people accumulate throughout their lives, enabling them to realize their potential as productive members of society. To understand human capital, Becker (2010) recommends referring to the family, because it is families that are concerned about their children and try, with whatever resources they have, to promote their children's education and values. Hence this part of the findings is discussed under the following headings:

- a. Livelihood Strategies Adopted**
- b. Dependent's Status**
- c. Details on Unproductive Population**
- d. Educational Status of the Family**
- e. Livelihood Technologies Used**

**a Livelihood Strategies Adopted** Livelihood strategies include a range of activities that people undertake to achieve their livelihood outcomes. Decisions on livelihood strategy, according to Momtaz and Shameem, (2016), mostly are influenced by individual's access to a level coupled with a combination of assets. The ensuing table and Box illustrate the livelihood strategies adopted by the selected sample.

**Table 18: Livelihood Strategies Adopted**

Strategy adopted	Percent Responding (n=162)
Agrarian workers	39.5
Non formal wage employment	21.6
Livestock rearing	16.7
Work in Government Scheme	10.5
Casual wage earners	8.7
Informally hired wageworkers	3.1

**Box 10 : Livelihood Strategies**

**Casual wage work:** It is work undertaken for a wage, for short periods. It most often refers to relatively low skilled /unskilled work

**Informal sector:** Work in sectors where regulation is minimal or nil

**Wageworker:** S/he is a worker who works for another person or establishment for a wage. They usually work on short-term (often orally agreed upon) contracts and get daily/weekly wages

**Agrarian worker:** An agrarian system does not optimize production or even produce for exchange. Farmers in this system produce just enough to support their food , non-food needs.

The samples pursued a diverse set of activities and income sources as a livelihood strategy for the well-being of their families. Almost 40 per cent engaged in transitory employment could be appropriately termed as „**agrarian workers**“. It was evident from the study that none of them were engaged in any livelihoods that ensured steady/ stable flow of income for the families. According to an ILO document, for the large majority of people across all countries, the most important livelihood asset is primarily their own labour. It is clear therefore, that the selected sample primarily depended on their labour as investment in adopting their livelihood strategies. As is rightly said the households were found to pursue **survival livelihood strategies** due to the fact that their income-earning opportunities were limited, and because they lacked access to livelihood assets. It is proved therefore that the sample thrive on **subsistence living**. Actually the women of the households were found to be working as **unpaid family workers**.

**b. Dependent’s Status:** The settlement comprised of 49.4 per cent of women. Among them only 42 per cent reported to be engaging in activities that contribute to their family income. Above all 35 per cent of the samples were found to be **dependent**. According to Krishna Kumar (2019), “**someone who has no income can only survive as a dependent**”. That is how children and the elderly often do. The family provides the cover that the State does not explicitly acknowledge.

Despite nuclear families being predominant (46%) it was surprising to record 43 per cent of the families reporting their family size to include 4-6 members and 35 per cent who went to the extent of comprising more than six members. The major point revealed by the findings is that even if they were nuclear, the number of children, begotten in a family was above Governmental norms in some households.

Majority belonged to the < 16 years age group (67%) followed by senior citizens above 65 years of age (17 %). A negligible proportion of 7.89 per cent each from housewives and migrated, college going children respectively also joined the **dependent group** as none of them earned for their living. Evidently the **number of mouths to feed from the meager income was found to be very high.**

**c. Details on Unproductive Population:** Details on this score were delineated for more classic findings. Data obtained through the survey revealed the number of children below five years as 20, which included seven girls and 13 boys. Number of children in the age group 2-5 years (during survey period) was 12 which included four girls and eight boys. Number of children in the age group 1-1.5 years (12-18 months) was five comprising three girls and two boys. There were 16 adolescent girls, a pregnant woman and two lactating mothers during the period of study. Those above 65 years were also there and it was pathetic to record five per cent also to be unemployed (housewives and college goers). With dwindling in the number of children begotten by the sample women, this statistic may decrease. The findings therefore brought to light **35 per cent** of the sample population to be in the **unproductive age**, where the earning category had to take care of all the needs of those who were unproductive along with self-care. These factors prove that **human capital support** is very low.

**d. Educational Status of the Family:** As stated earlier, it was disheartening to record **38.71 per cent (plus 8 per cent of children below 5 years of age)** of the settlement population selected for the study to be **illiterates**. The next group to follow was those who had studied up to Matriculation (32.26). While graduates were minimal (2.69 %), presence of Post Graduates was dismal. Remote access to Schools and Colleges had added to the plight. **Factors contributing to Human Capital support were eventually showing a declining trend.**

**e. Livelihood Technologies Used:** The inhabitants of the settlement were found to be quite raw with little or no knowledge on the technological advancements in livelihood strategies.

They were found to use traditional **tribal based technologies** for their survival issues. Every other approach was achieved only adopting **indigenous skills and tools**. For none were they found to practice scientific methods. The women especially could put to use only their indigenous skills, passed on from generations to do the activities they were adept with, namely Arappu powder making, broom making, processing of farm produce and being docile and not bargaining with the middlemen if at all they helped them in collection of NTFP or MFP.

**The analysis of options available in terms of livelihood strategies, reflect that the Human Capital supported only the concerned samples *per se* on which they were entitled to, which appears to be bleak and limited.**

### **Economic Status**

This aspect describes yet another intangible resource available to the samples proclaiming their livelihood status. Hence, this part of the study dealt with the following aspects explained under:

- a. Total Family Income**
- b. Monthly Expenditure Pattern**
- c. Debt Particulars**
- d. Savings**

**a.Total Family Income:** The cumulative earnings of the sample is presented under the Table 19.

**Table 19: Total Family Income of the Sample**

Total family income (Rs. per month)	Percent Responding (n=54)
< 5000	51.8
5001 – 10,000	48.1

It was very agonizing to record for more than one half of the sample, the monthly family income was below Rs. 5000/- and only 48 per cent to be falling in the next range of Rs. 5000 – 10,000/-

**. It can be concluded that the economic status of the selected settlement was very poor.** As per a Housing and Urban Development Corporation (HUDCO) document of 2016, Economically Weaker Section (EWS) households are those having an annual income up to Rs.3,00,000 and a dwelling with a carpet area of up to 30 sq. ft. (<https://www.hudco.org/writereaddata/Shelter-apr16.pdf>). Explaining the status citing these evidences one can never hide the visible transparency which clearly projects the economically vulnerable status of the sample. **All belonged to the EWS households.**

Evidently when questioned about adequacy of income revealed only ten per cent to find it adequate. They too were found to manage by cutting down expenses (53%), borrowing (26%) and postponing expenses (21%). Poverty in India based on caste working paper (2011-12) had declared the percentage of **poverty to be highest among Scheduled Tribes**, almost **43 per cent**([https://en.wikipedia.org/wiki/Poverty\\_in\\_India](https://en.wikipedia.org/wiki/Poverty_in_India)). Analysis on these lines forces one to conclude that the concerned sample is in poverty. These facts prompted finding out the budgeting pattern followed by them

**b. Monthly Expenditure Pattern:** Whatever the income may be, any family would at least have a mental plan on their expenditure pattern. The findings on this score are tabulated below

**Table 20 : Monthly Expenditure Pattern**

Items of expenditure	Expenditure (range in %)	Percent Responding (n=54)
Food	10 – 30	54
	30 – 60	44
	60 – 80	3
Clothing	< 10	22
	10 – 20	63
	20 – 30	15
Health	0 – 10	87
	10 – 20	13
Shelter	10 – 20	74
	20 – 30	26
Transport	<10	45
	10 – 20	55
Education	<10	38
Others - Gifts, guests, temple visit, etc.	<10	42
	10 – 20	55
	20 – 30	3

Food followed by clothing was the two items where the samples had shown much interest in expenditure planning. Health expenses were not much because of the free treatments in Government hospitals and visits by doctors to the village as part of the services of NGO's. Housing expenses were not much taken care of reflecting the pathetic conditions of the housing structures. With minimal earnings, meeting all ends meet definitely would have been quite stressful.

**c. Debt Particulars:** More than half the samples stated to be in debts and a few samples had borrowed at an unaffordable rate of interest, above 30 per cent interest per annum. Loans

were taken from local money lenders and financiers. Sample who was eligible had availed loans from banks at subsidized rate of interest (below 15%). Short term loans were also taken from neighbours and relatives at no interest rates. **Loans were taken for puberty function, marriage, death, house repair and purchase of goat.**

**d. Savings:** Though the economic status of the sample was found to be low the survey revealed that they practiced savings too. For nearly one third of the sample (31%) annual savings was up to Rs.5,000/- and 26 per cent had saved above Rs.10,000/- in the last financial year. Nearly one fourth of the samples hadn't even thought about it.

### **Tangible Resources Accessed**

Tangible resources are those which can be felt, touched. Hence this part of the study is explained under the following headings:

#### **Physical Capital Status**

##### **Social Capital Status**

**Physical Capital Status:** The details pertaining to this aspect of the study is explained under the following headings:

- a. Livestock Possessed**
- b. Consumer Durables Possessed**
- c. Housing Conditions**
- d. Other Infrastructure**
- e. Commutation and Communication**
- f. Entertainment Facilities**
- g. Unique Identification Cards**

**a. Livestock Possessed :** Possession of livestock is a good personal indicator of an individual's socio-economic status. According to the survey done for baseline studies in the year 2014 the following data was recorded.

**Table 21: Number. of Livestock possessed**

<b>Particulars</b>	<b>No. of livestock</b>	<b>No. of families</b>	<b>Percent (N=54)</b>
Goat	164	22	41
Goat Kid	115	22	41
Cow	141	19	35

Forty per cent of families were into goat rearing and 35 per cent reared cows in their houses. Pigs, buffalo & poultry were also reared in a few houses. In subsequent years due to severe drought conditions and loan defaults rearing cows was not a viable proposition for many families.

**b. Consumer Durables Possessed:** All the families had benefitted from the freebies provided by the State Government and disbursed through public distribution system to all ration card holders. They included consumer durables like fan, mixie, grinder, colour television, cycle, lap-top, etc.

**ousing Conditions:** Inadequate and improper housing affects both health and productivity adversely apart from the question of welfare and well-being which an individual and the family derive directly from congenial housing conditions. Hence this aspect of the study is described under:

**i. General Housing Conditions**

**ii. Physical Conditions of the Houses**

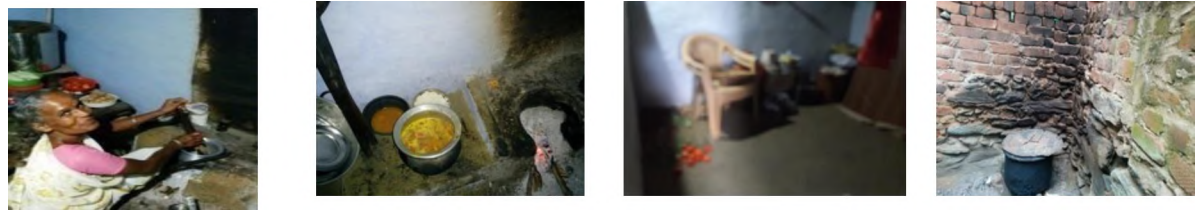
**iii. Dwelling Conditions**

**iv. Problems faced with Housing**

**i. General Housing Conditions:** Table (22) and Exhibit (3) elaborate on the general housing conditions of the samples

**Table 22: General Housing Conditions of the Selected Sample**

Particulars		Percent Responding (n=54)
Nature of house	Owned	100
Type of house	Katcha	45
	Semi-pucca	55
Number of rooms	One	84
	Two	12
	Three	4
Number of Windows	Single	78
	Double	22
Bathroom	Nil	95
	Single	5
Latrine	Nil	Nil
Kitchen (enclosed)	Nil	12
	One	88
<b>Materials used</b>		
Floor	Mud	40
	Cement Plaster	26
	Dung Spread	34
Walls	Mud	21
	Brick	26
	Stone	53
Roof	Thatched	45
	Tiled	55



Soot stained walls/floors



Thorn Compound Wall



Burial Area

**Exhibit : 3 Housing Conditions and Burial Area**

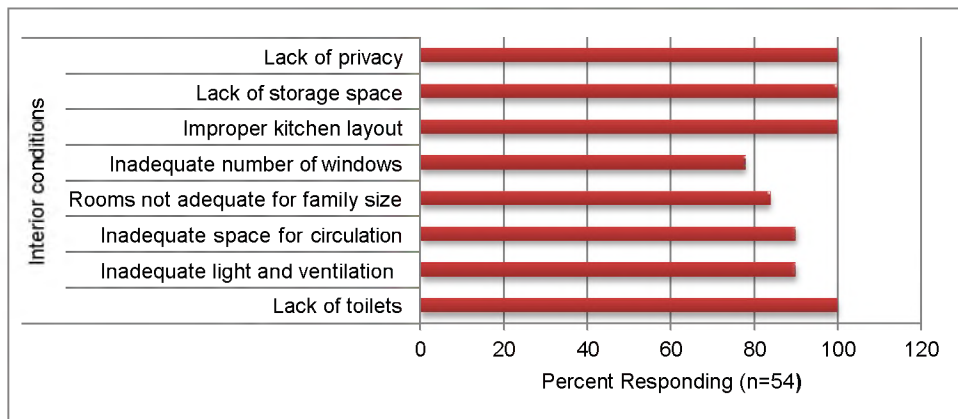
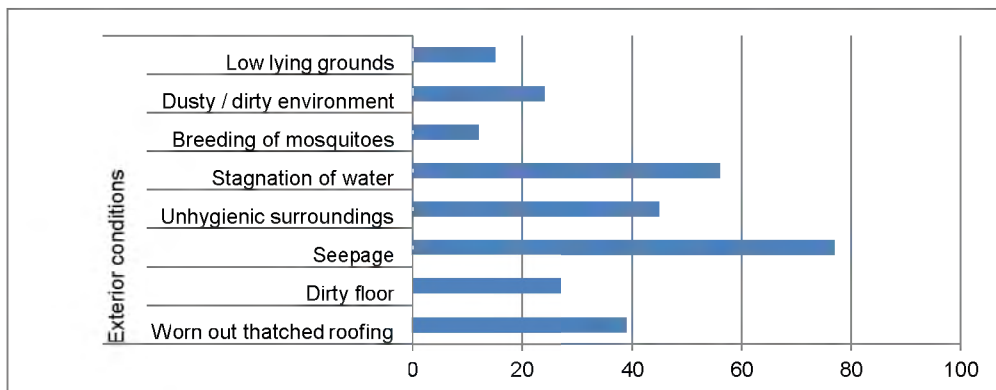
Majority of the houses were found to be more than 30 years old. **Though they had occupied the settlement area long back and had made provisions for a house which they claim as their own, none of them possessed any title deeds/ documents to own the premises.** This is on par with Kumar's (2012) findings. The area plus „whatever qualified for their house“ was found to be handed over generations after another. Anyway all the samples happily stated to be living in their own houses. **It was agonising to find that a small house was occupied by two families and there were many such houses. It was pathetic to record 84 per cent living in a one – room house** with just four per cent boasting of three rooms. Irrespective of whether it was a single room or double room house 78 per cent had provision only for a single window for ventilation purposes and 88 per cent of the houses had an enclosed kitchen. Naturally adequate ventilation and free flow of air within the houses was not ensured. Many of the houses still had their hearth on the floor and showcased soot stained walls/floors. Evidently **the Interior Air Quality (IAQ) that has to be maintained to ensure human well – being was found to be absent.** Exhibit (3) explains the internal housing conditions of the samples. While **none of the families had a toilet** and were used to open defecation, for bathing too it was agonizing to record just five per cent to have made some make shift arrangements in their houses identified by them as a bathroom.

While 53 per cent had raised the infrastructure of the house with available stones, 26 per cent had used brick. Working in brick kilns as contract laborers could be attributed as a reason for their access to bricks. Still 21 per cent lived in least durable mud wall houses. Flooring again was very poor. Only 26 per cent had cement plastered their floors. While majority just had put mud plaster, 34 per cent had only spread cow dung to create a surface called floor. Access to tiles had benefited 55 per cent of the households while 45 per cent still were found to live in thatched houses. All these portray the pathetic condition in which the samples lived with family, sometimes housing even more than six members. Majority of the houses were of kuchcha type. **Essential constituents of quality housing, namely, IAQ, cubic space adequacy, ventilation and sanitation were inadequately provided for the households.** These definitely reflect on the personal health and wellbeing of the samples. **Another important finding was that none of the samples were sanctioned Scheme houses which they were entitled to during the period of study.** All these necessitated studying the physical conditions existing in the interior and exterior of the houses.

- i. **Physical Conditions of the Houses:** Table (23) and Fig (5) projects the physical conditions ensured in the houses of the selected sample

**Table 23 : Physical Conditions of the Houses**

Particulars		Percent Responding(n = 54)
Interior conditions	Lack of toilets	100
	Inadequate light and ventilation	90
	Inadequate space for circulation	90
	Rooms not adequate for family size	84
	Inadequate number of windows	78
	Improper kitchen layout	100
	Lack of storage space	100
	Lack of privacy	100
Exterior conditions	Worn out thatched roofing	39
	Dirty floor	27
	Seepage	77
	Unhygienic surroundings	45
	Stagnation of water	56
	Breeding of mosquitoes	12
	Dusty / dirty environment	24
	Low lying grounds	15



**Figure 5: Physical Conditions of the Houses**

This is an important parameter highlighting the comfort and convenience the inmates of a house enjoy and the one which can impart a direct influence on the health and well – being of the individuals. According to Park (2015) the floor area of a living room should be at least 120 sq.ft. if more than one person is living in the same house. The provision for air flow in the rooms should be at least 1000 c.ft. so as to provide sufficient air space to the occupants. The major principles that are to be satisfactory to qualify for adequate housing facilities were found to be depressingly inadequate. Even the basic requisites were not satisfied like toilets, privacy etc. These reiterate the practical problems the inmates faced living in such houses.

**iii. Dwelling Conditions:** A majority of 80 per cent of the residents was living in semi-pucca houses, but the rest were living in a bare thatched shack. The site area available extended from less than 200 to 500 sq.ft which accommodated only a single room. In a few houses there was low level partition for separating the kitchen area. (Exhibit 4)

The entrance to the house was a small door less than 6 feet. Only a negligible proportion (<10%) had separate rooms for kitchen and/or sleeping area. There was no compound wall for the houses, though some had a thorn fence for privacy sake.

Cooking was done twice a day. A few women cooked outside the house (except during rain or windy season when it was inside the house), but many lacked an enclosed kitchen. It was one common room for sitting, eating and sleeping.

Plastic bags were reported to cause lethal effects to goats and other livestock if consumed. Hence, plastic bags were burnt. Though it caused pollution in the environment, the village was maintained free of plastic litter.

**iv. Problems Faced with Housing:** Given the type of housing and dwelling conditions it is no wonder that they could air out certain basic problems that they encountered. The ensuing Table (24) presents pertinent data.

Problems faced with housing were many - rodents , termites , crevices and holes , leaking roof , lack of thermal comfort , low ceiling, seepage in floors / walls , uneven floor surface , high maintenance expenditure and the like.



**Exhibit 4 : Pitiable dwelling conditions**

**Table 24: Problems faced with housing**

<b>Problems</b>	<b>Percent Responding (n=54)</b>
Rodents	100
Lack of storage facility	100
Termites	100
Lack of safety	100
Lack of privacy	100
Lack of thermal comfort	100
High maintenance expenditure	100
Entry of water during heavy rains	100
Elephants visiting village	100
Seepage - floors / walls	94
Uneven floor surface	94
Crevices and holes	89
Leaking roof	87
Low ceiling	87

Space constraint (for storing, living), dismal prospects for privacy and safety- all negative features not only posed practical problems to live but also spoke on their personal /health and well-being. These had mounted their maintenance expenditure too every year.

Herds of elephants entering the village often (damaging their houses and injuring residents) and fear of poisonous snakes and rodents added very much to their plight.

Despite owning a house, they stated that they lived with a permanent fear complex and a sense of insecurity.

d. **Infrastructure Enjoyed:** This part of the study is dealt under the following side headings:

- i. **Access to Safe Drinking Water**
- ii. **Access to Fuel**
- iii. **Access to Civil Supplies (Public Distribution System)**
- iv. **Governmental Assistance**

**i. Access to Safe Drinking Water:** Water from underground was stored in a public overhead water tank. The capacity of the tank was only 30,000 liters, which is insufficient for the entire village. Source for water was the underground water, accessed by the two bore wells of the village. Water supply was from one open well and also public hand pump which was nearly 500 mts away from a few of the houses. The brackish water from bore wells was the only source of water which was used for all purposes such as drinking, cooking, washing and bathing. The quality of the water for safe drinking was not known. Majority of the families did not practice boiling of water before drinking.

ii. **Access to Fuel:** LPG was not in supply in the village at the time of the baseline survey. Firewood, crop residue and cow dung cakes were used as fuel for cooking, all of which emanated smoke and rendered as a health hazard and a major cause of environmental pollution. Fodder resources were scanty. Forest land was the major source for firewood. They had to walk long distances (more than two km) in search of fodder and fuel and carry 10 to 20 kg of firewood as head loads. Absence of kitchen was a felt lacuna. A few houses were provided LPG connection later, but the cost of a gas cylinder being above Rs.600/- , they felt it costly, so they were mainly found only to use firewood for fuel

iii. **Access to Civil Supplies:** All the families in the settlement were ration card holders. The sample or the spouse visited the Public Distribution Shop (PDS), located in two places, Tholampalayam (5 kms) and Pattisalai (2 kms). Majority of the families (63%) visited this fair price shop once a month, while the rest frequented every fortnight or weekly once. Their visits coincided with either information about the supply of consumer items or whenever they had enough funds to purchase. Hence presence of a PDS, availability of goods at fair prices never featured as a positive sign of their empowerment status, only their economic situation which enabled the necessary liquidity made them empowered. A few of the items available for purchase from fair price shops are listed in the following Table 25.

**Table 25: Commodities at Fair Price Shops**

S.No	Items for purchase
1	Wheat 5 kg @ Rs.7.50/- per kg
2	Kerosene 3 L @Rs.15/- per L
3	Palm oil 3 L@ Rs.30/- per L
4	Red Gram dhal 1 kg @ Rs.30/- per kg,
5	Tea dust 100 g @ Rs.10 /-
6	Idli rice 5 kg @ Rs.5/- per kg
7	Sugar 2 kg@ Rs.22/- per kg,

**Box 11: Below Poverty Line**

Below Poverty Line (BPL) card holder should be given 35 kg of food grain as per the norms of Public Distribution System, Indian foods, established by the Government of India under Ministry of Consumer Affairs. All the card holders in the settlement availed 35 kg free rice per month thus establishing their below poverty line status.

Items purchased at subsidized rates were maida, salt, soap, coconut oil, coffee, other pulses, cereals and millets depending on the stock status of the commodities. However, the sample reported that the food grains supplied by the ration shops were not enough to meet the consumption needs of the entire family and was of inferior quality. Hence they had to buy commodities in the weekly market for much higher rates. Household items were also bought in weekly installment payment from vendors visiting the village.

e. **Commutation and Communication:** Many residents (more than 30%) possessed a two-wheeler. For others the only option to commute from the village to the nearby town was

the Government run town bus plying to the City twice daily. Similarly a good 30 per cent of the total samples owned a mobile phone for communication purposes. Educational status, livelihood option adopted and mobility preferred were found to influence possession of these facilities. The settlement was totally cut off from the rest of the world, communication wise in that there was no provision made for even a public telephone booth which could connect them with the town during an emergency.

f. **Entertainment facilities:** Thanks to the State Government Scheme, all the houses possessed a colour television set. Yet, majority of women did not view television programmes because of work load, lack of interest and as they were not in a position to cull out the stipulated charges of Rs.75/ per month for the Tamil Nadu controlled cable network/set top box connection. A few women agreed to be viewing TV shows or regional movies. None of them were interested to view News channels. They never went to the theatres to watch movies. **Recreational activities were totally Nil.** Access to theatres being very far, fear complex to return home late in the night after the movie and absence of such a facility in the village and neighbourhood were attributed as reasons. Community parks, common recreation rooms, community library and the like were also missing. Neither did the settlement enjoy the regular radio broadcast of daily News which used to be amplified for common good in other villages.

Vyas and Kumaranayake (2006) also consider durable asset ownership, access to utilities and infrastructure (e.g. sanitation facility and source of water), and housing characteristics (e.g. number of rooms for sleeping and building material) as essential services which can determine socio-economic status of individuals. The findings prove that **the selected settlement does not enjoy many of these services which can contribute to their personal health and well – being in a wholesome way.**

g. **Unique Identification Cards:** The survey revealed more than 80 per cent of the population to possess the unique identification card called **Aadhar card**, which all the more establishes that they are the citizens of the country.

**These findings prove that many of the indicator variables which stand testimony to development of settlement were inaccessible to the villagers - a major factor acting as deterrent to empowerment of the entire village and especially the women folk.** Many aspects could also be attributed to their ignorance, lack of awareness, reluctance and lethargy to learn rather than to accessibility in the real sense.



**Social Capital Status:** Information collected on this score is presented under the following headings:

**a. Utility and Services Accessed or Available**

**b. Social Protection/Assistance Enjoyed**

**a. Utility and Services Accessed or Available:** Utilities (water, electricity and gas) are essential services that play a vital role in economic and social development. Quality utilities are a prerequisite for effective poverty eradication (<https://www.ilo.org/global/industries-and-sectors/utilities-water-gas-electricity/lang--en/index.htm>). Hence, the data concerned with the Utility services (infrastructure) provided by the Panchayat (Local Governance) for the benefit of Senguttaiyur Irular residents was enlisted, the details of which are tabulated and presented with figure.

**Table 26: Access to Utility Services in the Settlement**

Parameters provided	Status of existence in Village	Distance from Village
Electrification	Entire Village	--
Hand pumps	Two	--
Open wells	One	--
Solar street light panel	None	--
Noon meal centre	None	500 meters
Elementary school	None	2 km
Public Health Centre (PHC)	None	6 km
PHC sub-centers	None	10 km
Weekly market	None	6 km
Co-operative societies	None	6 km
Nationalized Bank	None	6 km
Higher Secondary School	None	12 km
High School	None	8 km
Veterinary dispensary	None	6 km
Common Library	None	6 km
Police station	None	24 km
Fire station	None	31 km
Polling Booth	None	3 km

Access to the utility services was restricted to **electrification of the entire village** (thanks to the Central Government’s Rural Electrification Scheme implemented recently), two hand pumps for water, an open well and an **Anganwadi**(Government operated day care centre for preschool children) situated 500 M away. All other utility services that they were entitled to access freely were situated far away and was quite a task reaching them especially during an emergency. Even schools which are the prime pointers to empowerment of settlements (as education as an indicator can impart a sense of development in anybody) was found to be approached crossing several kilometers. **None of the essential services were readily approachable/ accessible** (Geo tag figure).

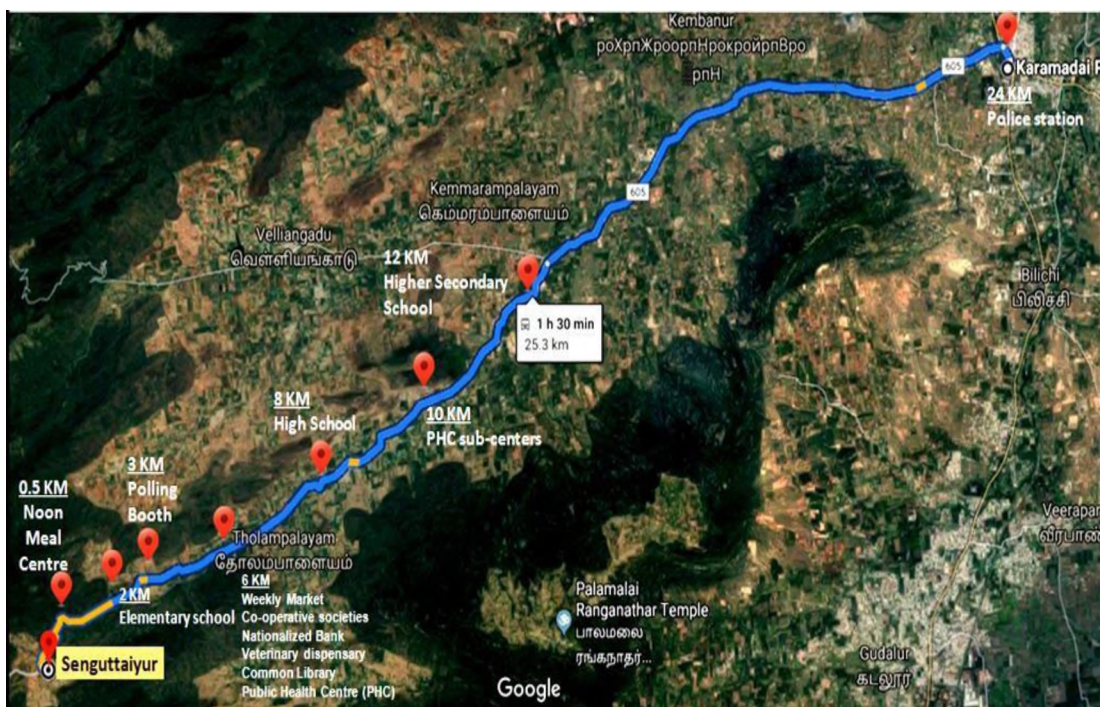


Figure 6: Geo tag Figure showing access to essential services from the village

## b. Social Protection/Assistance Enjoyed

The samples reported to be enjoying various social protection services sponsored by State and Central Governments from time to time. Along with that, several NGOs were also found to extend **Social assistance** programmes as part of their CSR activities or social service endeavours. Appendix (V) projects a few major Schemes from which the selected samples had benefitted. These findings restricted assessing the sample’s level of living.

### **Box :12 Social Protection**

**Social Protection** is concerned with preventing; managing and overcoming situations that adversely affect people's well-being. Social protection consists of policies and programs designed to reduce poverty and vulnerability by diminishing people's exposure to risks, and enhancing their capacity to manage economic and social risks, such as unemployment, exclusion, sickness, disability and old age (UN Research Institute for Social Development)

The most common type is Social Assistance. It is when resources, either cash or in-kind, are transferred to vulnerable individuals or households with no other means of adequate support, including single parents, the homeless or the physically or mentally challenged.

### **B. Assay on Levels of Living of the Concerned Group**

Levels of living manifest an individual's quality of living or living standards. They are true indicators of how a person lives and the factors that contribute or deter their status. Hence this part of the study is analyzed under the following headings:

#### **Determinants of Levels of Living**

**Awareness Status on Indicators Depicting Quality of Life**

**Economic Status of the Concerned Cohort**

**Freedom for Women to Voice in Decision Making Situations**

**Introspection on Empowerment Status (Pre-intervention)**

#### **Determinants of Levels of Living**

Social and economic conditions are the major determinants of health and well - being. Social and economic determinants of health and well – being refer to both specific features of and pathways by which social conditions affect them. They invariably consider socio economic indicators, family structure, service access and utilities, etc. Details about **those parameters listed, which were alone quantifiable** were chosen for analysis of the samples for understanding their socio economic status (position). Therefore, the findings on this aspect of the study are discussed under the following headings:

#### **Fulfillment of Socio-Economic Parameters**

**Quality of living – Existing Status**

**Concept of Well-being Related to Environmental Management**

**Fulfillment of Socio-economic Parameters:** The social class is usually defined by the status, the members of a specific class possess in relation to members of other class. Status is often explained in one or more of the convenient demographic variables (precisely socio- economic) like income, housing, nutritional status, educational attainment etc., states Nair

(1999). Hence this part of the study analyzes the extent of fulfillment the samples enjoyed regarding the ensuing factors:

- a. Literacy Level
- b. Housing and Over –crowdedness
- c. Nutritional Status
- d. Income Level
- e. Health and Medical care

a. **Literacy Level:** The study revealed 38.7 per cent of the settlement inhabitants to be illiterates excluding those who were below five years of age and School/ College goers.

**Table 27: Literacy Level**

Particulars	Percent responding (n=186)
Illiterate	38.71
Up to or below 5 <sup>th</sup> standard	17.20
Up to or below 10 <sup>th</sup> standard	32.26
Up to or below 12 <sup>th</sup> standard	8.60
Under graduation	2.69
Post graduate	0.54

The survey brought to light a majority of the adult population in their productive age to be illiterates. Maximum schooling represented was only up to Secondary School. Reluctance, natural lethargy and distance to educational facilities can be attributed as reasons.

b. **Housing and Over–crowdedness:** This aspect of the study reveals satisfaction of the third basic need of man, namely shelter. The following pointers project the status of gratification of this important need for the concerned sample.

**Status of Occupancy:** Size of household is one of the parameters, determining the socio – economic development of the people, state Selvarajan and Elango (2004), and housing them properly is another parameter fixing the family in a particular social class. This aspect was found out by analyzing and tabulating the number of rooms to occupancy fitment. It was alarming to record 54 per cent to belong to joint families with 4 -6 members (43%) and those with more than six members (35%) living in a single room occupancy, as 84 per cent had reported to be dwelling in a single roomed house. Naturally, space available per capita was depressingly inadequate. As per standards (Park, 2015) an individual is supposed to enjoy a minimum of 100 sq.ft personal space for comfortable living. This was not only a felt lacuna

but the samples were also found to complain about the much needed privacy as totally lacking.

If the accommodation is much too small for household it may be considered to be living in over-crowded conditions under the law. The home may be legally over-crowded if there are not rooms or enough space for the number of people residing there. The data obtained was therefore calculated for over-crowdedness as suggested by Park (2015) and the findings brought to light that more than 84 per cent of the samples to be living in over-crowded houses.

**c. Nutritional Status:** The principal food of Tamil Nadu is rice, dhal, vegetables, milk and fish or meat. A regular meal pattern of the concerned sample for a day consisted of cereals, lentils, dhal and sometimes vegetables. Dairy products in any form were not consumed by majority of the families. Even consumption of non-vegetarian was restricted. Man needs a wide range of nutrients to perform the basic functions of the body and to lead a healthy life (Gopalan *et.al.*, 1996). The following Table presents the nutritional status of the samples based on their regular diet calculated from a three day recall method.

**Table 28: Nutritional Status of the Samples**

<b>Nutrient</b>	<b>Protein g</b>	<b>Fat g</b>	<b>Carbohydrate g</b>	<b>Energy kcal</b>	<b>Calcium mg</b>	<b>Iron mg</b>
Total	30.88	2.68	193.23	1195.4	347.17	.25
RDA	50	0	212	2225	400	30

From the details presented it is quite clear that their diet pattern was rich in fat content alone and was inadequate to supply the much needed proteins, Calcium and Iron as per Recommended Daily Allowance (RDA) standards.

**d. Income Level:** According to Housing and Urban Development Corporation (HUDCO) stipulations as quoted by Jain (2017) all the samples could be categorized under Economically Weaker Section (EWS) as 56 per cent earned only below Rs.5000/- while the rest below Rs.10,000/- every month. It was only a hand to mouth existence as the family size was also very large.

**e. Health and Medical care:** Health wise the samples reported to be strong and sound. The health status of the village people obtained from the health personnel of the Block are tabulated below.

**Table 29: Health Profile of the Tribes**

<b>Health parameters</b>	<b>Status</b>
Life expectancy at birth	94 %
Birth rate	17.6
Death rate	6 %
Average birth weight of child (kg)	3.2 kg
<b>General Health</b>	
Incidence of malnutrition	12 %
Symptoms of ill-health	12 %
Nutritional status	Average
Personal hygiene	Poor
Nutritional and dietary habits	Poor
Expenditure on health care	< 10 % of annual income
Expenditure on nutritious food	< 5% of annual income

Though their nutritional status was not very appreciable, health profile of the settlement as such was found to be very glaring from the records of the local governance. The indicators pointing to their health status were found to be dismally poor, especially their affordability to spend on personal health care and nutritious food. Probably because their treatment costs were borne by the hospital itself, they were not spending more it is obvious.

Based on these data satisfaction derived by the concerned sample on the primary and secondary indicators were deduced and are presented below

**Primary indicators found satisfactory**

- Health wise except a negligible proportion, others were found to be comparatively healthy.
- Approximately 36 per cent of women population had studied either 5<sup>th</sup> standard or up to 10<sup>th</sup> standard. Almost 29.8 per cent of women and 33.0 per cent of men of the total population were illiterates
- Their meal pattern included major foods from cereals, pulses and select vegetables and occasional non-vegetarian. Naturally the foods did not match the recommended daily allowances.
- As far as housing was considered all were living in owned houses
- All families enjoyed household appliances (Gas stove, mixer, Grinder and television)obtained through the Public Distribution System
- All received products from Civil Supplies regularly for their Ration Cards

- Presence of an Anganwadi supported nutritive requirements of preschool children, pregnant women and lactating mothers and adolescent girls (as presented in Table 30 and Plate 4)
- Anganwadi supplied sanitary napkins free of cost (provided by State Government) to girls and women
- Anganwadi supplied medicines from their stock for cold, fever, cough, antiseptic ointments

**Table 30 : Supplies from Anganwadi**

Beneficiaries	Description	Total	Benefits accrued from Anganwadi
Children	< 2 years	08	Daily noon meal and egg on two days
	2 - 5 years	12	Daily noon meal and egg on one day
Adolescent girls	11-14 years	09	Nutritious flour mix
	15 -18 years	07	Sanitary napkins
Women	Pregnant	01	Nutritious flour mix
	Lactating	02	Nutrient supplements



**Plate 4: Details of Anganwadi**

### **Secondary indicators found satisfactory**

- All the samples were found to get leisure, but were not able to, rather did not use them enjoyably.
- Ambient environment was very safe as far as air for breathing was concerned.
- They felt safe and had developed belongingness for the place.
- They had an access road from the village to the next town, but not well laid.
- Public Transport was available. (bus plying twice a day)
- Government Scheme for 100 days'' work was implemented.
- The samples were aware of certain other Government Schemes too.

### **Primary indicators found unsatisfactory**

- Health wise the samples complained of frequent pain in different parts of the body.
- More than 65 per cent (70.2 per cent of women and 67.00 per cent of men) of the total population were illiterates.
- Approximately 8.6 per cent of the adult population had studied up to 12<sup>th</sup> standard, and 32.2 per cent of the adult population had studied up to 10<sup>th</sup> standard, 38.7 per cent of the population was illiterates.
- All those working for a living were employed/ engaged only in the unorganized sector.
- Livelihood options were very traditional ones like subsistence farming, livestock rearing, semi-skilled and unskilled jobs.
- There was no permanent income for majority of the families.
- All were living on subsistence living.
- Though they reported of having regular meal pattern, the foods consumed lacked in many of the essential nutrients and hence their consumption was much below RDA standards.
- Despite all of them owning a house, a majority of 45 per cent were living in Kutcha type of houses with minimal conveniences.
- The samples were found to be living in overcrowded housing conditions. Space allocated per person did not satisfy recommended standards.
- **None of the houses had toilets (latrines).**

## **Secondary indicators found unsatisfactory**

- Lack of entertainment facilities was a felt lacuna
- Though they had TV (obtained from State Government dole out), but were not using it as they have to pay for installing the private channels, which was beyond their purse
- Similarly many of them did not use the gas stove as they did not have funds to purchase a cylinder. Use of fuel wood for cooking/ heating had not only affected their living environment but had also affected their health status as many complained of respiratory problems
- Totally recreation concept was absent
- The ambient environment within the interiors (house) was not satisfactory with due respect to the space enjoyed by each - which was much below the set standards for per person occupation, ventilation, privacy and sanitation.
- Lighting within the interior was also found to be insufficient
- Access to the village was by a winding dilapidated road through the reserve forest area
- Had to travel minimum 20 Kilometers to reach Karamadai, the nearest township
- Had to travel long distances to reach Hospital (more than 10 kms), PHC (6 kms), Schools (primary school-8kms, high school -12 kms), etc.
- Even the Anganwadi in the village did not have proper infrastructure, it was just an open shed and the children are exposed to the sun and wind

The settlement though were found to be aware of various Government Schemes floated in their favour had never attempted to benefit from them which was really a pitiable state of affairs. (Appendix V). There are endeavours to enhance de-jure empowerment, which they had not accessed. Though they had access, they had not benefited in utter adamance not to empower selves.

Based on observation and the data collected, the status of living conditions of the selected sample was assessed. The evaluation of the same is summarized under primary and secondary indicators (Table 31).

**Table 31 : Summary of the Existing Living Status of the Samples**

<b>Indicators</b>	<b>Existing status of the selected sample</b>
<b>Primary indicators</b>	
Economic	Inadequate earnings
	Loans at high interest rates
	Lack of Fair pricing
	Inequality in wages
	Exploitation by Middlemen
Health	Sufficient Calorie Intake
	Lack of Medical Facilities
	Physical ill-health
	Drudgery
Social political	Lack of socialization
	Unhygienic living conditions
	Lack of recreation
	Restricted political participation
Infrastructure	Lacking in material possessions
	Poor housing and environment
<b>Secondary indicators</b>	
Education	Illiteracy, ignorance
Leisure	Not Provided

The ten constituents used to span the spectrum of critical dimensions of human well – being by Rusell, *et.al* .(2015) are physical and mental health enjoyed by residing within that eco system, feelings on certainty, sense of control and security, sense of place, learning and capability, inspiration and fulfillment of imagination, identity and autonomy, connectedness and belonging, and a subjective overall well – being. The findings of the study on the satisfaction of primary and secondary indicators have proved that the samples were not enjoying 100 per cent satisfaction of the indicators listed by Jackson (2008). They were only partially contended with the stated constituents. It can therefore be concluded that their status of well – being was not up to expectations.

**Quality of Living – Existing Status:** Social economic profile of the sample also is a reflection of one’s quality of living. Hence the existing status of the settlement was compared with the projected rates published by Social Development Report, 2011. Details are projected under Table (32) .

**Table 32: Socio - economic profile of the selected sample**

Indicator parameters		Projected rates	Existing status
Social Sector	Birth rate	16.6 per 1000 inhabitants	15.2 per 1000 inhabitants
	Death rate	6 per 1000 inhabitants	6.7 per 1000 inhabitants
	IMR	17	17.8
	MMR	11.1 per 10000 live birth	11.1 per 10000 live birth
	Sex ratio	996:987	958:1077
	Mean age at marriage	21 years (F)	18 years (F)
	Literacy	73.44%	56.91%
	Annual expenditure	Above Rs.90,000/-	Rs.50,000/-
	Family size	4 members	4 members
	Health status	100 % Healthy	Fairly Healthy
	Access to hospitals	More than 100	One PHC access at 6 km
Infrastructure	Fuel		Satisfies minimum needs
	Water	River, Lake, Borewellwater,Treated Water	Borewell water, Treated water not available
	Electricity	Total	Entire settlement
Transport		By Air, Road, Rail	Bus, Two Wheeler
Nutrition	Calories	2225 k cal	1195.4 k cal
	Protein	50 g	30.88 g
	Iron	30mg	9.25 mg

- (Based on indicators of the Social Development Report, 2011)

Agricultural labour households are among the poorest segments of the rural society. Rural/ tribal society feature low ratio of inhabitants to open land with production of food grains, as the major focus. Naturally their lives revolve around satisfaction of minimum living requirements. Hence details existing were compared with the minimum requirements recommended in Social Development Report (2011).

The socio - economic profile of the selected sample and a few major statistics of the block were analyzed from the data obtained and are compared with the projected rates for each, obtained from varied sources. They picture the national provisions made with the real supplies. The findings are presented under Table 33 .

The contributors of information have been the ward offices, anganwadi and the Tahsildar office. Except for total electrification of the entire settlement, none of the parameters put forth by the Social Development Report 2011 (latest census ) were found to have been satisfactorily met/ provided in the chosen settlement. The most glaring factors were the sex ratio, mean age at marriage, literacy, hospitals and their nutritional status.

#### **Concept of Well-being Related to Environmental Management**

Eco-system includes both biotic elements (living things) and abiotic elements (including water, nutrients, energy etc.) and interactions amongst them. Well –being is

dependent on how well they interact, manage and benefit from the environment as well-being is defined as the people's capacity to be and do well in life, and achieve a state of health, happiness or prosperity. This aspect of the findings therefore highlights the ways in which the selected sample interact and benefit from the environment, especially for livelihood options and are discussed under the following headings:

**Access to Ecosystem Based Services (Abiotic and biotic elements)**

**Techno Factor (rural based) Embraced for Survival**

**Access to Ecosystem Based Services (Abiotic and biotic elements)**

Abiotic components include physical conditions and non-living resources that affect living organisms in terms of growth, maintenance and reproduction. Resources are distinguished as substances or objects in the environment required by one organism and consumed or otherwise made unavailable for use by other organisms, state Ricklefs (2005) and Chapin, et.al (2011). All non-living components of an ecosystem, such as atmospheric conditions and water resources, are called Abiotic components (Water Quality Vocabulary. ISO 6107-6:1994.). Abiotic factors include availability of water, light intensity, radiation, temperature, humidity, atmosphere, pH of soil and water, and salinity of soil and water. The macroscopic climate often influences each of the above.

The Tribal Settlement of Senguttaiyur Village is nestled in the Nilgiri Biosphere Reserve, an International Biosphere Reserve in the Western Ghats and Nilgiri Hills ranges of South India. The Nilgiri Sub-Cluster is a part of the Western Ghats, which was declared a World Heritage Site by UNESCO in 2012. The reserve encompasses 5,520 km<sup>2</sup> and the area covered in the State of Tamil Nadu is 2537.6 km<sup>2</sup>. It forms an almost complete ring around the Nilgiri Plateau. The biosphere lies between 10°50'N and 12°16'N latitude and 76°00'E to 77°15'E longitude. The Nilgiri Biosphere Reserve is very rich in fauna and also in plant diversity Exhibit 4.

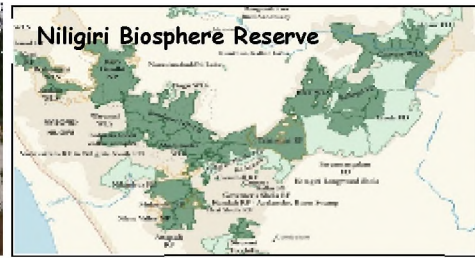
**Techno Factor (rural based) Embraced for Survival**

The study revealed **the samples to be unaware of even the basic tools that can help them enhance their productivity**. Men did not use sophisticated tools in their line of activities. The plight of women was still worse as they were not even using the labour saving devices obtained as freebies like mixer and grinder (fearing consumption bills) and gas stove (lack of funds to replace gas cylinders). Many of them were found to cook outside the house using fuel wood collected from the forest area. It was not only because of this reason; major one was that they did not have a separate kitchen. They were still used to primitive tools. (Exhibit 5).

River Bhavani



Niligiri Biosphere Reserve



*Solanum Trilobatum*



*Turmeric*



Physical map of Tholampalayam

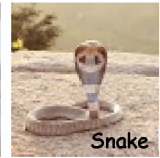


Uggyanur

Mentiyur

Chikampathi

Neelampathi



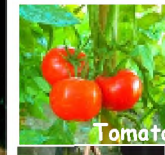
Snake



*Gymnema Sylvestre*



*Adhatoda Vasica*



Tomato



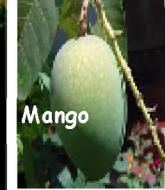
Ladies Finger



Pearl Millet



*Senna Auriculata*



Mango



Bitter Guard



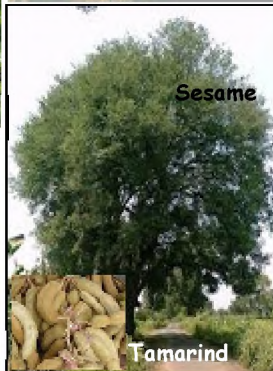
Brinjal



Horse Gram



Jowar



Sesame

Tamarind



*Alibizia Amara*



Amla

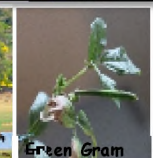


Foxtail Millet

Papaya



Elephant



Green Gram



Cowpea

Exhibit:4. Biotic and Abiotic Resources in Coimbatore Forest Circle

It was heartening to record **a major finding that the Irular women were adept in collecting and processing an indigenous shampoo product from a resource (Alibizia Amara – Arappu in Tamil)** which had an appreciable demand among urban and rural women, but which was not done in large scale due to technology lag. Intervention on this score can be of help to empower them.

**(i) Natural Resources Accessed: Forest produce** is defined under section 2(4) of the Indian Forest Act, 1927 (*envfor.nic.in*). They include the ethnic natural resources permitted for access by the community. Data collected regarding this part of the study analysed the legitimate access sanctioned to the selected sample and the extent to which they had utilized the same, details of which are discussed under the following headings:

**a. Access to Forest Land and Resources**

**b. Farming Activities Taken up**

**c. Access and Collection of NTFP/ MFP**

**d. Benefits Accrued**

**e. Nature of Use for the Collected NTFP/MFP**

**f. Person Responsible**

**a. Access to Forest Land and Resources :**The Reserve forest area to which the settlement is attached was found to be rich and to nurture various plants and trees which have high revenue value in the market like *Albizia amara (Arappu)*, tamarind, amla, *Gymnema sylvestre*, *Bambusa arundinaceae*, *Sennrsoura auriculata*( Avarampoo) etc. to name a few. The tribal were entitled access to all these as their settlement lies within the Revenue forest division. Nevertheless the samples were found to exercise marginal access only. Due to **lack of knowledge on the economic/ commercial value of such resources in the market and resources being sold in the raw form without value addition**, the natives did not get a fair return for their labour. Moreover as they were **exploited by middlemen** who settled them for meager returns, **distress selling** could also be attributed as a reason.

Another natural resource accessed by them (by virtue of being employed as contract labour by other stakeholders) was collection and cleaning of tamarind. Both the herbal hair wash powder and de-husked and deseeded tamarind was done **manually on “home-scale”**. (Exhibit 6).



Dry Grinding



Powdering



Winnowing



Primitive tools used in households



Manual Process of making Alibizia Amara (Arappu) Hair wash powder



Manual Process of Deseeding Tamarind

Exhibit 6. Rural Techno – factor embraced for livelihood

**b. Farming Activities Taken up:** In around 33 per cent of the selected sample's families (n=54) men agreed to be engaging in horticultural activities in small patches of land (cleared by them) within the forest area or near their houses, which they could not claim as owned property because they do not possess any „Patta“ or title deeds for the same. They resorted only to **horticultural crops**. The crops grown in the small patches never lent for profitable sale as whatever they cultivated was only **subsistence crops**.

**Box 13: Subsistence crops**

**Subsistence crops** are those grown primarily to be consumed by the farmer and his family or to be fed to the farmer's livestock. Literally, the term is applicable where there are farmers who prefer to grow their own crop for sustenance and not for marketing(<http://www.livelihoods.net.in/sites/default/files/pdf/Tamarind.pdf>)

**c. Access and Collection of NTFP/ MFP:** Though the samples were given free access, the collection, processing and sale of many of the NTFP/MFP (perhaps could have been lucrative if done adopting appropriate technologies) was found to be considered only as a seasonal employment. Many of them were found to work as contract or casual labour for contractors or forest department.

They were only expected to work as collectors and processors. They were denied rights for sale. Like in barter system, sometimes the contractors used to give them a quantity to be processed and sell them for personal benefit. Only those they were selling to others or were using for their households. Because of these reasons they were not able to procure the natural resources for a marketable quantity.

**Box:14 Forest Produce**

**Forest produce** can be divided into several categories. From the point of view of usage, forest produce can be categorized into three types: Timber, Non Timber and Minor Minerals. Non-timber forest products [NTFPs] are known also as *minor forest produce* (MFP) or *non-wood forest produce* (NWFP). The NTFP can be further categorized into medicinal and aromatic plants (MAP), oil seeds, fiber & floss, resins, edible plants, bamboo, reeds and grasses ([en.wikipedia.org/wiki/Forest\\_produce\\_\(India\)](http://en.wikipedia.org/wiki/Forest_produce_(India))).

**Box:15 Non-Timber Forest Produce**

Non-timber Forest Products (NTFPs), also known as non-wood forest products (NWFPs), minor forest produce, special, minor, alternative and secondary forest products, are useful substances, materials and/ or commodities obtained from forests which do not require harvesting (logging) trees. They include nuts, seeds, berries, foliage, medicinal plants, fuel wood etc.

For household use the samples agreed to be collecting fuel wood, herbs for cooking and medicine, seasonal fruits, neem seeds, honey etc. whenever possible. The major resources, the processing of which they were skilled in were tamarind, amla (MFP), and *Alibizia amara* (NTFP).

**d. Benefits Accrued:** Despite having a rich natural resource potential around them, the samples were found to take up collection and processing of the same only as seasonal employment or work during lean periods. Therefore the income earned was irregular and marginal. Moreover during non-seasons they were left with no jobs (as they lacked in skills to continue with collection and processing), with no income. Such lean periods were stressful days when they were not even able to make up normal earnings. Further these being cash crops were not able to support any of their consumption requirements directly too. **The lacuna with the samples being less skilled and technologically adept was very much visible through the findings.**

The tribal possess the traditional fundamental skill, have access to the resource base and have conducive government policies on NTFPs management and trade. Yet it was not found to compliment in their livelihood support in terms of subsistence, income and employment generation in the study area. **It is clear that proper intervention on these aspects can help empower the community as a whole enabling employment (self too), regular income and consumption requirement support.**

**e. Nature of Use for the Collected NTFP/MFP:** The NTFP/MFP collected by the selected sample was rich in medicinal value, consumption value and commercial value. Hence promoting entrepreneurs on these products can definitely enhance their skill development, income potential and living status at large.

**f. Person Responsible:** The general practice followed by the settlement was women to collect fuel and water for cooking and the men to collect fodder for the livestock. But regarding MFP the survey revealed the women to be doing the collection and processing procedures; practically the jobs highlighted “**feminization of work**”. The women were found to have an umbilical bond with the natural resources and having only limited/restricted access to them, the factor practically **addresses “eco feminism”**. Only the men (contractors) benefitted from the procured resources. Such kind of dominance over women (who are skilled in this process) was evident. The women possessed the indigenous skill to collect and process MFP and NTFP, but the technology being rural based or conventional, their productivity was found to be very low; further they felt the jobs very laborious, monotonous and drudgery. Hence they were found to accept only jobs for piece meal rate which helped them to earn a meager income. They never cherished any long or medium term goals. As long as a day’s requirement was taken care of they felt gratified.

Though the sample and settlement was gifted by Mother Nature to access and benefit from various natural resources, the findings prove that it was not capitalized by them. It is evident therefore that the concept of well-being related to environmental management where they have to be active players is pitifully poor. It is also clear commercialization of rural based products to enhance their well-being never occurred to them.

**This lack of confidence in self, complacency in whatever they earned, and undermining of their personal skills were the factors to be tackled to enhance their status.** Another feature was that nobody had approached them before to help them develop their personal skills through advanced technology which is the need of the hour to bring them into the economic streamline.

The village being a Forest Settlement Village in the Coimbatore Forest Circle, Perianaikenpalayam Range, the forest officials were invited by the investigator to motivate the women and make them understand that the application of their traditional skills and village-level technology in forest-based enterprises will provide secondary employment and livelihood opportunities for tribal people besides playing a vital role in the environmental amelioration in the block. The Perianaickepalayam Forest ranger aptly made them understand that although the cash earned from MFP may only be an additional income, participation in the trade is an important source of self-esteem, pride and independence, especially for women. These prompted the sample's feelings of satisfaction on development

#### **Awareness Status on Indicators Depicting Quality of Life**

**Quality of life** is the general well-being of individuals and societies, outlining negative and positive features of **life**. It observes **life** satisfaction, including everything from physical health, family, education, employment, wealth, safety, security to freedom, religious beliefs, and the environment (Barbara, 2013). Knowledge on the QL variables illustrating the status at national level are a *sine-quo-non* of the empowerment status of the selected sample as it will be a phenomenon which would take them to a higher plane of awareness and understanding of what is happening around them. From awareness alone active action to achieve those positive may result. Hence this part of the study was streamlined to obtain responses of the samples on select QL variables about which they were aware of.

Using the checklist framed (Appendix II) indicating the probable variables of QL, the response of the sample with regard to their level of awareness on the stated factors were elicited. The findings are discussed under:

Awareness on Economic Variables of QL

Comprehension of Infrastructural Variables

Perception on Technological/ Communication Variables

Interpretation of Behavioural Variables

Views on Social Variables

Awareness on Economic Variables of QLs: Table presents details on the same

**Table 33: Awareness on Economic Variables of QL**

Nature	Domains	Sub domains	Samples aware of
			Percent Responding
Positive	Gender related	Women's participation in farm work	85
		Employment status of women	85
		Equality of work (male/ female)	74
	Participation in economic activities	Percentage of self employed	79
		Rate of employment	64
		Nature of occupation	48
		Employment in organized/unorganized sector	36
		Work participation rate	25
	Agro- concerns	Possession of modern equipment in farming	66
		Livestock resources	39
		Area under irrigation	30
		Proportion of cultivable land	28
	Health	Expenditure on nutritious food	18
		Expenditure on health care	15
	Water resources	Water management	12
Child welfare	Expenditure on education	70	
Income	Per capita income	12	
Negative	Child welfare	Incidence of child labour	95
	Participation in economic activities	Incidence of educated unemployed	47
	Income/expenditure	Incidence of indebtedness	20

It was encouraging to record that the sample women were aware of gender related work participation as a majority of 85 per cent spoke of it followed by participation in economic activities. These facts are indicative of the apprehension they had for not being a part of it. As positive aspects two more factors namely expenditure on child welfare and use of modern farm equipment's were those they knew about. All other positive factors never attracted much of their notice. Nevertheless, three negative factors namely incidence of child labour (95%), plight of educated unemployed and indebtedness, probably because they had endured it were known by them. Very many positive factors that could contribute to their

empowerment were left unnoticed. **Awareness generation on these important variables deserves address in the intervention agenda.**

**Comprehension of Infrastructural Variables:** Governmental policies and schemes had introduced a host of infrastructural facilities to empower citizens. But the question lies in how many of the concerned samples were aware of it. The following Table projects light on the same

**Table 34: Comprehension of Infrastructural Variables**

<b>Domains</b>	<b>Infrastructural variables considered</b>	<b>Percent responding (n=54)</b>
<b>Energy</b>	Electrification	<b>100</b>
<b>Child welfare</b>	Balwadi/ Anganwadi/ Creches	<b>96</b>
<b>Health</b>	Health Care centers	<b>96</b>
	Doctors / specialists and equipment	<b>96</b>
	Medical shops	<b>96</b>
<b>Education</b>	Access to educational institutions	<b>96</b>
	Adult and non-formal education	<b>28</b>
<b>Transport /communication</b>	Transport and communication	<b>96</b>
<b>Family welfare</b>	Fair price shops and other purchasing avenues	<b>96</b>
	Special provisions for women in the vulnerable groups	<b>26</b>
<b>Sanitation</b>	Drainage/ Sewage facilities	<b>83</b>
	Protected drinking water supply	<b>70</b>
<b>Employment</b>	Technical / Vocational institutions	<b>41</b>
	Village/Cottage industries/ small scale industries	<b>22</b>
<b>Credit/ loans</b>	Financial / credit Institutions - bank and co-operatives	<b>26</b>

Except those related to Industrial development, adult education, financial institutions and special provisions for women it was found that the samples were well aware of those factors contributing to communal development. The settlement enjoyed total electrification. What knowledge they lacked was only on indicators that contributed to their personal development. **Awareness generation on these lines was found to be needed.** The findings are proof enough to conclude that they were well versed in aspects where they had an active role (as consumers), but lagged behind on those aspects for which they had least access.

**Perception on Technological/ Communication Variables :** Perception refers to the ability to see, hear, or become aware of something through the senses. Hence this ability of the samples to identify the variables categorized under this aspect was analyzed and is presented under Table 35.

**Table 35 : Perception on Technological/ Communication Variables**

<b>Domains</b>	<b>Technical and Communication indicators</b>	<b>Percent reporting (n=54)</b>
<b>Leisure / recreation</b>	Exposure to mass media – radio	100
	Exposure to mass media – TV	100
<b>Household chores</b>	Labour saving devices in the household	90
<b>Fuel &amp; energy</b>	Use of alternative/ renewable source of fuels	89
	Adoption of energy conservation measures	27
<b>Communication</b>	Campaigns conducted	85
	Exposure to telecommunication / mobile phone	30
<b>Agro techniques</b>	Training on improved agriculture	42
	Postharvest Technology- Food Processing	39
	Postharvest technology – storage	24
	Postharvest technology- preservation	24
	Adoption of high yielding varieties/farm technologies	22
<b>Media</b>	Exposure to mass media- print media	5

The State Government had distributed television sets, mixer and grinder to all households of the village. Even though there was no Newspaper supply, more than 30 per cent of the respondents possessed mobile phones for communication. Despite more than 50 per cent belonging to farming group, it was alarming to record very poor response to indicators related to farm and postharvest technologies and techniques for processing, storage and preservation and also was less knowledgeable on high yielding varieties and farm technologies. Lack of facility for preservation of harvested products was a felt lacuna.

**Interpretation of Behavioural Variables:** Behaviour is the sum total of awareness, attitude and adoption. Table presents information on the relevant topic.

**Table 36 : Interpretation of Behavioural Variables**

<b>Behaviour</b>	<b>Indicators</b>	<b>Percentage reporting (n=54)</b>
Awareness	Social customs/ taboos	97
	Practices on dowry - ( dowry taboos)	95
	Small family norms	94
	Causes of communicable diseases	75
	Financial help	56
	Prevention Healthcare	45
	Personal hygiene	35
Adoption	Gender bias	65
	<b>Amniocentesis</b>	<b>00</b>
	Dowry system	07
	<b>Female infanticide</b>	<b>00</b>
Attitudes	Family Welfare measures	75
	Health practices	34
	Better living conditions	33
	Nutrition/ Dietary habits	50

Knowledge on social customs (which they need to abide to), dowry, and small family were found to be aware of by more than 90 per cent of the samples while 75 per cent knew about the causes of communicable diseases. Similarly they were aware of human attitudes related to social custom/ taboos and practices affecting dowry (97 and 95%), though the practice of dowry system was negligible. **A very gratifying factor was that none of the samples were aware of Amniocentesis and female infanticide, the social evils prolific in modern family situations and in the Southern belt of Tamil Nadu.** They were not aware of such practices, a very happy indicator that the social evils which have permeated urban settings have not reached this innocent settlement.

**Views on Social Variables:** Table presents details on the same

**Table 37: Views on Social Variables**

Domains	Variables	Percent responding (n=54)
Social structure	Family type	100
Social evils	Proportion of SC and ST	95
	Incidence of social evils/ crimes/ big litigations	75
	<b>Incidence of untouchability</b>	<b>00</b>
Special Programs	Intervention programs for weaker sections	80
	Rehabilitation of socially oppressed	65
Leadership/training	Leadership pattern	80
	Women's participation in Panchayat and cooperation	45

Surprisingly the samples were very much aware of six of the social indicators from the eight listed. But it was again **very heartwarming to record that none of them were aware of the concept of untouchability**, a practice that had corrupted the urban population. Participatory role of women leading to leadership still was found to be surreal.

From the inferences drawn about the settlement's status of awareness on variables perceived as fundamentally essential for development, the realities of how the samples had not **exercised their rights to capitalize from the amenities** could be judged. The samples were poor in their knowledge about indicators which can promote their personal development and contribute to communal development and at the same time were ignorant about those existing variables which are qualified as social evils and designated as evil practices. Hence further decisions should propel action on dispelling lacunae on the factors about which they responded badly, because rights and amenities are phenomena which can **project to a community their rightful position as responsible citizens in the country.**

### Economic Status of the Concerned Cohort

The health status of any society depends on the socio – economic status (SES) and the per capita income of the citizens (Singh et al, 2017). As the general status of the sample was not found to be very encouraging, it was felt necessary to assess their socio- economic status based on the following lines:

#### Status quo on Per Capita Income and Expenditure Socio – Economic Status of the Sample

#### Status quo on Per Capita Income and Expenditure

The following Table reveals the Per capita Income calculation for the selected families/ samples

**Table 38: Economic Status of the Samples**

Particulars	Range (in Rs)	Percent responding
Annual Income	<3,00,000	<b>100</b>
Monthly per capita income	500 – 1000	57.0
	1001 – 1500	24.0
	1501 – 2000	07.4
	2001 – 2500	11.1
Daily per capita income*	<32 (BPL)	<b>31.48</b>
	>32	68.5
Monthly per capita expenditure*	<972	<b>27.7</b>
Per capita Annual income (projected rates for 2017-18)	At Current prices (Rs.1,12,835)	11.11
	At Constant prices (Rs.86,668)	3.7
	Below above ceilings	<b>85.19</b>

- Range fixed for Rural areas

According to HUDCO classification (clause for sanctioning housing loan under Prime Minister's Awas Yojana) those families whose annual income falls up to Rs.3, 00, 00/- are categorized under **Economically Weaker Sections (EWS)** of the society, reports Jain (2016). The annual income of the samples being below the range all the samples can be classified under **EWS** category.

Rangarajan Committee was set up in 2012 to devise a new formula for calculation of income level and classify families based on per capita income. It recommended **Rs.32/- per day in rural** areas and **Rs.47/- per day** in urban areas (Varma, 2018). Based on this classification **31.48** per cent of the samples could be brought under the **Below Poverty Line (BPL)** umbrella.

Similarly the same committee had classified those **rural families** where the **monthly per capita expenditure is below Rs.972/- to be classified under BPL**. In the present study, for **27.7 per cent** of the samples, the monthly per capita income itself was found to be below Rs.972/-. Hence those 27.7 per cent of the samples are classified under BPL category.

As per projected rates for per capita annual income for 2017-18 based on current and constant prices only 11.11 and 3.7 per cent of the samples featured respectively. The remaining 85.19 per cent earned below the projected figures and hence could be categorized only under the BPL group.

Above all these findings the **local Governance in the Village had enrolled them as BPL families, enabling them eligibility for ration from the Public Distribution System**.

The per capita daily income of the selected sample based on the livelihood activity taken up was found out and the details are presented under Table 39.

**Table: 39 Monthly Per capita Income of the Selected Sample (Women)**

Monthly per capita income (Rs)	Selected women samples					Total
	Percent responding					
	Housewife	Contract labour (Scheme)	Farming	Unorganized labour	Other livelihood activity	
<32	3.7	5.6	9.3	11.1	1.9	31.5
>32	13	11.1	18.5	11.1	13	68.5

Pitifully 32 per cent of the sample women were found to enjoy a monthly per capita income less than Rs.32/- only despite 30 per cent earning for a livelihood. Out of the total sample of women surveyed almost 68 per cent, enjoyed above the stipulated Rs.32 per day per capita. The family to be precise enjoyed above the prescribed sum mainly because the women had taken up some kind of livelihood activity, though all were sort of impermanent activities. Even then a pathetic fact was that except under the Government sponsored Scheme contract work (MGRES 100 days labour) – a seasonal, temporary activity - in all other types of jobs, more than their temporary nature, gender disparity in wages fixed and practiced was very depressing. In the unorganized sector men were entitled to Rs.350 or more a day, while women were given only Rs.250. **Reducing feminized poverty** cannot be achieved in such situations.

### **Socio – Economic Status of the Sample**

The SES status of the concerned cohort was calculated based on two published, popular, widely accepted Scales, the findings of which are delineated below under the two headings:

#### **SES Status of the Sample Families as per Kuppuswamy Scale**

#### **SES Status of the Sample Families as per BG Prasad Scale**

#### **SES Status of the Sample Families as per Kuppuswamy Scale**

The Kuppuswamy scale modified by Singh et al (2017) was used to classify the samples for their SES status. Revisions were incorporated in the original scale revised twice earlier mainly for income classification. It basically considered three aspects, namely, education and occupation of the head of the family along with monthly family income. The Scale positioned the families in a descending rank order with Upper SES scoring First, upper middle, lower middle, upper lower and lower scoring II,III, IV and V ranks respectively. The SES status of the selected sample is depicted in the following Table

**Table:40. Classification of Sample for SES Status (Kuppuswamy Scale)**

<b>Total Score</b>	<b>Socio- economic class</b>	<b>Percent responding (n=54)</b>
26-29	I - Upper	12.9
16-25	II - Upper middle	46.29
11-15	III - Lower middle	27.7
5 -10	IV - Upper lower	12.9
<5	V – Lower	00.0

It was heartening to record 46.29 and 12.9 per cent of the samples (households) respectively to be in the Upper and Upper middle ranges of the SES status scores. In their cases evidently the educational level and the corresponding increase in income level had contributed to their status. Though income wise the status of the sample was not encouraging, the SES scores are real soothers.

#### **SES Status of the Sample Families as per BG Prasad Scale**

This Scale considers only the per capita monthly income (computed for 2017 Consumer Price Index- CPI), the findings of which are presented in (Table.??)

**Table:41. Classification of Sample for SES Status (BG Prasad Scale)**

<b>Per capita monthly income (range in Rs.)</b>	<b>Socio- economic class</b>	<b>Percent responding (n=54)</b>
1876 -3126	Middle class	12.96
938 – 1875	Low middle class	64. 8
<938	Lower class	22.22

According to this classification, lower middle class group predominated followed by 22.22 per cent in the lower class.

From all the above analysis it can be concluded that the economic and socio-economic status of the selected samples and their families need to be augmented through appropriate intervention programmes that can help in improving both.

### **Freedom for Women to Voice in Decision Making Situations**

The personal control belief check list framed and published by Kapadia (1993) was modified to suit the present context, the tribal setting and the women cohort and was used to comprehend the extent of freedom/control the samples enjoyed in decision making strategies at the household level. The questions were asked from topics regarding their education, health, marriage, child birth, property partition, social activities, etc. to all the 23 situations included in the checklist. The subjects were given a choice of three answers – self, self & others, others where „others“ can mean husband or mother-in-law or anybody else, etc. The subjects were cajoled to give free and frank answers about their opinion to each question to facilitate the researcher to get in depth knowledge about the extent of the subjects role in daily activities and decision making situations she faces at home.

The responses for the queries was categories under age major decision situation The eight major decision situations were establishing a family, managing the family income, children's education, girl's preferences for education/marriage, healthcare, social functions/socialization, share in family property and existing personal status. Whenever decisions are made in a family, all the members, especially the house wife also has to be consulted. Unfortunately, this is quite hypothetical in many families. General opinion stated is that, in tribal families, women have the right to express their opinion on major decisions. In order to find out the status of the Irular women on this aspect, the check list was administered. It was satisfying to note that the women had a say in deciding the number of children to be birthed, education of children, healthcare and for the existing personal status. Though not allowed in cent percent of the households, at least 40-60 per cent enjoyed the permission. Influences of others on the same matters were also found to be high.

**Table : 42 Decision Making Behaviour of the Selected Sample Control exercised by influencers**

Major decisions	Situations where decisions are taken	Percent responding (n=54)		
		SSelf	Self & others	Others
Establishing a family	Number of children to beget	37.1	37.1	25.7
	Desire to beget more children	<b>60.0</b>	11.4	8.6
Managing family income	A part of family income spent on something felt unnecessary	<b>40.0</b>	28.6	31.4
	Part of personal earnings (income)spent on something felt unnecessary	<b>67.6</b>	8.8	23.5
	Expending family income on something desired only by the sample	21.2	27.3	51.5
	Expending personal income on something desired only by the sample	<b>74.3</b>	11.4	14.3
Children's education	Educating a child spending from self-earned income	<b>68.6</b>	20.0	11.4
	When education of children is not desired by others except the sample	<b>42.9</b>	42.9	14.3
	Decide not to choose a Course forced upon a girl by others	<b>75.8</b>	15.2	9.1
Girl's preference for education/marriage	Marrying somebody not to a girl's liking, but chosen by others	<b>42.9</b>	14.3	42.9
	Desire to do a Course of study not approved by others	<b>54.5</b>	6.1	39.4
	Marrying a person of choice by a girl amidst opposition by others	37.1	20.0	42.9
Health care	Personal health care	<b>48.6</b>	28.6	22.9
	Managing personal health problems	<b>62.9</b>	17.1	20.0
Social functions/socialization	Celebrating social/ religious functions when others are not in favour of it	31.4	11.4	<b>57.1</b>
	Visiting friends/ relatives as others want her to, but against sample's desire	37.1	17.1	<b>45.7</b>
	Visiting friends/ relatives whom they wish to, but not encouraged by others	<b>37.1</b>	28.6	34.3
Share in family property	Possess a share in divided property if samples wish to	<b>64.7</b>	14.7	20.6
	Claim a share in divided property when opposed by others	17.6	35.3	<b>47.1</b>
Existing personal status	Decisions leading to achievements in life	<b>34.3</b>	34.3	31.4
	Decisions exercising control of personal life	<b>48.6</b>	37.1	14.3
	Molding the personality	37.1	42.9	20.0
	Decisions taken for the failures in life	37.1	42.9	20.0

The study revealed that the samples could express their opinion only on decisions regarding children's studies and in matters relating to use of the income earned by them. Regarding health problems and tackling them it was found that women could take decisions on their own. Even in these matters, more than **30 – 40 per cent was not found to have freedom** as the decisions were taken by others or the sample's needed help from others. It is clear therefore even in personal matters or those related to children, the women did not have a freedom to decide. On all matters it was pathetic to conclude that only 30-35 per cent were

able to express their opinion or act according to their wish on all things, despite matters concerning their self. It was astounding to know that even they were (almost 70%) voiceless on matters related to inheritance. Influence of others in taking decisions was prominent in their decision making practices. But for all 23 factors listed influence of others without consulting the samples was the highlight.

### **Introspection on Empowerment Status (Pre intervention)**

**Introspection** is the examination of one's own conscious thoughts and feelings state Schultz and Schultz (2012). It involves sort of a self-reflection where the responses of the samples to queries put forth are reflections of their ability to judge (*a priori* knowledge) or personal experiences (*a posteriori* knowledge). Considering these facts, the responses received for the sample's status on the five indicators discussed in the Tayde and Chole Scale (2007) to comprehend their level of empowerment as personal feelings, perceptions and experiences was analyzed well before embarking on any intervention strategies to improve their status. The findings are discussed under the ensuing headings:

#### **Responses to Psychological Indicators of Empowerment**

#### **Reflection to Cultural Empowerment Indicators**

#### **Autonomy in Relation to Economic Empowerment Indicators**

#### **Experiences on Social Indicators of Empowerment**

#### **Indicators Pointing to Political Empowerment Status**

#### **Pre - intervention Empowerment Index**

**Responses to Psychological Indicators:** This aspect of the study is explained under Table 43

**Table43 : Responses to Psychological Indicators of Empowerment**

Indicators of Psychological Empowerment	Cues	Percent Responding (n=54)		
		Low	Medium	High
Self confidence	PSE1	14.8	29.6	<b>55.6</b>
Courage	PSE2	11.1	33.3	<b>55.6</b>
Self-reliance	PSE3	29.6	31.5	<b>38.9</b>
Feeling of security in family	PSE4	35.2	20.4	<b>44.4</b>
Career ambition	PSE5	<b>48.1</b>	27.8	24.1
Self-image	PSE6	<b>63.0</b>	14.8	22.2
Mean		33.6	26.2	40.1

This aspect of the findings through the six stated parameters revealed that the samples were comparatively strong in their psychological behaviour especially where their personal aspects like self-confidence, courage, feeling of security etc. were concerned. It was discouraging to record 35.2 per cent to feel low with regard to feelings of security at home. Career ambition and self-image were indicators for which majority responded in the low category. It is no wonder that the samples showed least interest to empower selves by enhancing their personal income.

**Reflection to Cultural Empowerment Indicators:** The tribe selected for the study is quite popular for their unique culture, cherishing of which and capitalizing on the special benefits could empower the women very well. The responses received on this score are presented under Table 44.

**Table : 44 Reflection to Cultural Empowerment Indicators**

Indicators of Cultural Empowerment	Cues	Percent Responding (n=54)		
		Low	Medium	High
Freedom to interact with male outside family	CE1	31.5	<b>35.2</b>	33.3
Freedom for eating a kind of food	CE2	29.6	20.4	<b>50.0</b>
Actual participation in festivals	CE3	7.4	20.4	<b>72.2</b>
Freedom for performing festival ceremonies	CE4	29.6	20.4	<b>50.0</b>
Freedom for wearing a kind of dress	CE5	33.3	27.8	<b>38.9</b>
Freedom for attending pilgrim / religious place	CE6	<b>35.2</b>	33.3	31.5
Freedom for deciding food menu / what to cook	CE7	35.2	25.9	<b>38.9</b>
Liberty for attending marriage ceremony	CE8	16.7	37.0	<b>46.3</b>

Cultural norms and rules laid by the community was found to be lenient enough to permit women in the tribe to enjoy preferences in eating and clothing, attending functions, performing ceremonies/ festivals etc. While 35.2 and 31.5 per cent respectively stated that they had only medium and low level of freedom to interact with male members outside the family, 33.3 per cent even were allowed to feel free in their interactions. Male domination was felt more in their autonomy to attend pilgrimage or religious places. This may be probably because of their economic status which prevented additional expenditure to be included in their already deficit budgets.

**Autonomy in Relation to Economic Empowerment Indicators:** In economic matters, the experiences of the samples are more on empirical terms and hence their responses will be “*A posteriori*”, and would reflect the autonomy they enjoyed in their reality. Table explains the data

**Table 45: Experiences on Economic Indicators**

Indicators of Economic Empowerment	Cues	Percent Responding (n=54)		
		Low	Medium	High
Opportunity for economic dev. in the village	EE1	<b>48.1</b>	22.2	29.6
Freedom for selection of job	EE2	<b>46.3</b>	22.2	31.5
Personal saving in form of fixed deposit	EE3	<b>72.2</b>	27.8	0.0
Operating personal account in bank	EE4	<b>51.9</b>	31.5	16.7
Adoption of modern technology in home/enterprise	EE5	<b>66.7</b>	24.1	9.3
Participation in decision about purchase/ build house	EE6	<b>42.6</b>	40.7	16.7
Participation in decision about marketing of produce	EE7	<b>53.7</b>	33.3	13.0
Participation in purchase of cow/goat/farm material	EE8	<b>68.5</b>	24.1	7.4
Authority to employ laborers	EE9	<b>64.8</b>	33.3	1.9
Freedom for spending on entertainment of guest	EE10	<b>33.3</b>	40.7	25.9
Freedom for offering presents to relatives	EE11	40.7	40.7	18.5
Mean		53.5	31.0	15.5

It was highly disappointing to record the sample women to report low level of empowerment on economic aspects (10 major indicators). Their status on self-development decisions even, they were found to be ignorant and voiceless. All major economic decisions were predominantly taken by the spouses providing room only for limited opinions by the samples. **Evidently the sample's empowerment status was found to be low on this score.**

#### **Experiences on Social Indicators of Empowerment**

Social indicators highlights the extent of socialization a woman is permitted and how far they are knowledgeable about social aspects of personal significance. Table (46) portrays the status of the sample women on this score.

Out of the 16 indicators listed in the Scale, for 50 per cent (8 /16) the samples were found to express their low level of empowerment. Neutral feelings of freedom were reported for issues related to working outside the family and consultation for health related matters. Even on personal health aspects they did not take decisions on their own. Yet almost 40 per cent were complacent in stating about feelings related to social security, respect in the village and freedom to mix with the same gender. **On this score too, the status of the sample was found not to be satisfactory.**

**Table 46: Experiences on Social Indicators of Empowerment**

Indicators of Social Empowerment	Cues	Percent Responding		
		Low	Mediu	High
Scope for economic development in the village	SE1	<b>5.6</b>	29.6	14.8
Freedom to work outside family	SE2	27.8	<b>48.1</b>	24.1
Freedom to visit hospital/ doctor	SE3	24.1	<b>38.9</b>	37.0
Freedom for adopting practices for maintaining	SE4	37.0	<b>38.9</b>	24.1
Participation in decision about family planning	SE5	<b>46.3</b>	29.6	24.1
Participation in community action	SE6	<b>53.7</b>	29.6	16.7
Feeling of social security	SE7	22.2	35.2	<b>42.6</b>
Participation in decision about education of	SE8	<b>44.4</b>	24.1	31.5
Participation in decision about girls marriage	SE9	37.0	25.9	37.0
Possessing desired social status / respect in village	SE10	25.9	33.3	<b>40.7</b>
Healthy social environment	SE11	24.1	<b>46.3</b>	29.6
Appreciation by family members for significant	SE12	<b>46.3</b>	24.1	29.6
Access to modern technology	SE13	<b>48.1</b>	29.6	22.2
Freedom to mix with (women) friends	SE14	33.3	27.8	<b>38.9</b>
Equal importance to men and women	SE15	<b>44.4</b>	29.6	25.9
Access to cooking gas	SE16	<b>57.4</b>	16.7	25.9
Mean		39.2	31.7	29.1

**Indicators Pointing to Political Empowerment Status:** Political involvement is an important indicator depicting basically the status of the community and the tribe itself. In such a context, the perception of women about this issue counts a lot. Details are presented in Table 47.

**Table 47: Indicators Pointing to Political Empowerment Status**

Indicators of Political Empowerment	Cues	Percent Responding (n=54)		
		Low	Medium	High
Holding a political position at present	PE1	<b>85.2</b>	11.1	3.7
Freedom for participation in active politics	PE2	<b>74.1</b>	20.4	5.6
Awareness of human rights	PE3	<b>70.4</b>	18.5	11.1
Awareness of legislation for women	PE4	<b>63.0</b>	33.3	3.7
Awareness of political institution	PE5	<b>63.0</b>	27.8	9.3
Mean		71.1	22.2	6.7

Awareness on indicators related to political indicators was again found to be depressing because for all the five indicators their score was low.

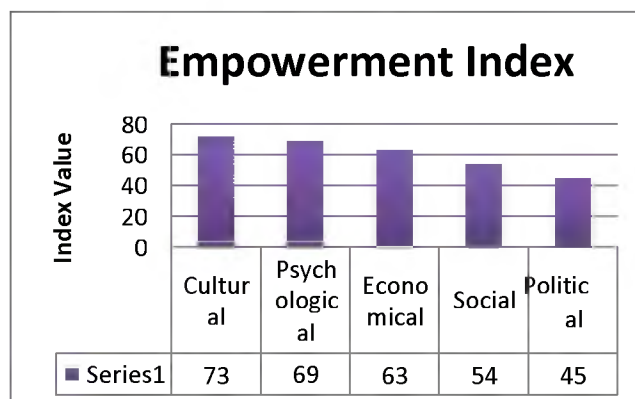
### Pre - intervention Empowerment Index

Based on the total scores obtained for the Item wise indicators (psychological, social etc.) the overall empowerment index was calculated and the details are presented under Table the following Table and figure. The adjoining Box (16 ) gives details on the formula used for calculation.

<p><b>Box : 16 Formula for Women Empowerment Index</b></p> $\frac{\text{Score obtained}}{\text{Maximum possible score}} \times 100$ <p><b>Eg: for Psychological Index</b></p> $\text{Sum} \times 100 \div (54 \text{ samples} \times 6 \text{ cues} \times \text{high score of } 3)$ $= 669 \times 100 \div (54 \times 6 \times 3) = 69$
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**Table:48 Pre intervention Empowerment Index**

Empowerment Category	Before Intervention	
	Index	Rank
Cultural	73	I
Psychological	69	II
Economical	63	III
Social	54	IV
Political	45	V



**Figure :7 Pre-Intervention Empowerment Index**

The findings of the study made evident that the samples were low in their perception on political and social indicators but were culturally knowledgeable. They reflected less satisfaction on psychological and economic indicators. **Hence intervention programmes to boost up their status in all these empowerment indicators is warranted. The facts also pointed out the need to locate specific weak points in the empowerment link, which signify the women’s limitations and constraints.**

### C. Appraisal of the Sample’s Empowerment Status

Empowerment can be assessed by various means involving different choice options regarding an individual’s ability to access resources with determination. This is based on the type of empowerment strategy available. It can be de-jure or de- facto which can ultimately decide their level of subjective empowerment. To enable study of a particular cohort and it’s status, an understanding of the attributes imperative to well – being need to be analyzed.

According to Breslow, *et.a.,l* (2017), (whose framework or model has been used as a guide-line and has been modified to suit the social context under concern) aspects which can provide a wider scan into the multiple concepts embracing human well – being are **resource access available** to the individuals and their **self determination to access them**. This essentially is more pronounced among tribal settlements, as both the resources available and the mindset of the people to access those remains ambiguous. With this in view, the attributes available have been analyzed based on their tangibility under the following headings:

**Box : 17 Attributes of Well-Being**

**Resource access** refers to people's ability to benefit from nature and natural resources plus the **cognitive capacities** to access those resources (Ribot and Peluso, 2003)

**Self-determination** refers to ability to shape their own lives, adaptability to tackle situations with freedom/ autonomy, exercise local and indigenous control over resources and have a perception on personal decision making skills, state Sen (2000) and Ryan(2009)

- Appraisal of the Tangible/ Less Tangible Dimensions of Well - being**
- Status quo of the Samples to Social Science Based Constituents of Well – being**
- Analysis of the Deterrents and determinants of Women Empowerment**
- Problem Tree Analysis to Define Deterrents**
- Solution Blooms to Specify Determinants**

**Appraisal of the Tangible/ Less Tangible Dimensions of Well – being**

The study made evident the efforts put in by Government (State and Central) to safeguard certain fundamental requirements of the settlement encasing them under various schemes and programmes (Appendix V), which the beneficiaries themselves acknowledged with gratitude. Yet to meet day to day requirements the samples lacked liquidity. This was a cause of stress which affected their well – being.

**Appraisal of the tangible dimensions of well-being** like economic level, environmental use, health status and educational level (as delineated earlier) were found to be obviously bleak, especially because their access to water, nutrients, energy etc., were not as expected. These findings helped to infer that the settlement and especially the women depended on **eco based livelihood** approaches but rather failed to access the available resources to meet their expectations, revealing their **poor embodied cognition status**. Further they evidently forced analyzing the women's (sample's) capabilities, limitations,

connectivity and connections which have a say in every individual's well – being proclaiming the **de-facto status of empowerment. The 4 C's have been modified for use in the present study as context, capacity and competence, connective links and convergence.**

**Less tangible dimensions of well-being** like social relationships (with the township, people outside their settlement, government officials etc.), cultural and spiritual values were also found to be given less significance. The settlement did not claim any special cultural or spiritual identity, though they were entitled to. They were essentially eclectic, unlike other settlements. They were in fact a **traditionally marginalized settlement but an exposed group (not much isolated)**. This has been a significant finding which led to look at the issues on the **4C's conceptual framework of human well -being** put forth by Breslow *et al* (2016). Referred to as ecosystem services and culturally mediated benefits they include the **social science based constituents of human well-being** namely the 4 C's. They explain the **physical cognition status** which is narrative of their **de-jure empowerment status**.

#### **Status quo of the Samples to Social Science Based Constituents of Well – being**

Breslow *et al* (2016) had proposed four major social science based constituents of well – being, **which have been modified to suit the purpose of this study - the status of well – being** of individuals. According to them all the constituents are expected to operate within a social – ecological context. The response of the selected sample on how far they access the resources available under specific constituents is discussed under the following headings:

##### **Context – Embodied Cognition and Use of Eco – based Tangible Resources**

###### **Capacity and Competence for Action**

###### **Connective Links – Cognition of Less Tangible Resources**

###### **Convergence - Domains Intersecting other Constituents**

##### **Context – Embodied Cognition and Use of Eco – based Tangible Resources**

By context is meant the circumstances or conditions that form the setting for an event, statement, or idea, and in terms of which it can be fully understood. In this context they are situations in which human needs are met and include the tangible qualities of environment, economy, safety and human health. These are the common indicators assessed in well-being studies and are related to the **embodied cognition** in individuals (Breslow, et al, 2016) which implies the way in which individuals interact with the environment and help guide how

they think and who they are – the phenomenal aspects that impact the core of one's well-being.

This aspect was studied to comprehend the cognition of the samples on their **access to eco-based tangible resources** related to the major issues of environment, water, health and safety in their settlement area. The findings revealed the following.

Though none complained of polluted environment, drought combined with wind was found responsible for fine dust in the air. Hence a few of them complained of respiratory problems. Walking up and down the terrain was recorded as a good exercise, though a few among the children/elderly found it difficult. The environment was reported as rich in minor forest produce accessible to them for maintaining life.

The samples had to travel far (a few women had to walk more than 500 meters to the nearest water pump) and carry head loads of water for household use. Due to failure of monsoons in recent years the area was drought-ridden and the settlement in its entirety had to depend only on specific sources (the single borewell source from which water is stored in the common water tank) to meet their water needs. Distribution through tap water connection at a specific point (for which provision was made recently) was also accessible only after walking through the hilly terrain.

For their medical needs they had to travel 10 – 15 Kms to reach the Primary Health Care centers run by the Government. Private and government hospitals/clinics are located 16-24 km from the settlement. Notwithstanding the fact that the samples could avail cost-free health services (treatment) in those hospitals and clinics, access was reported as a major hurdle. Health care of the family was also the women's responsibility. Medical camps are occasionally conducted by private trusts and foundations as part of their community welfare activities.

Presence of an Anganwadi providing noon meal and nutrient supplements (tablets, flour etc.) to children was a solace. Provision for supply of basic medicines and prospects for vaccination/immunization of children in the Anganwadi was a boon. Similarly as explained earlier pregnant, lactating women too benefited from their supplies of food products and medicinal supplements. In all these aspects the women in the families were found to express greater interest and hold a major role in family as well as community development.

Health wise, their intake was more or less starch rich, lacking in major nutrients and necessary minerals. Incidences of anemia especially among female population and course

skin and hair, edema and vitamin B deficiency was visible. Both their economic and educational level had a say in them not accessing/ consuming nutrient rich foods and maintaining general health and complexion. Exploiting the **culturally mediated benefits of the herbs and plants** with medicinal value speak not only about their innate skill to identify them but also to use them resourcefully in tackling illnesses.

These findings helped to infer that the settlement and especially the women depended more on **eco-based livelihood issues and approaches**.

**Appraisal of livelihood issues** highlight the *concept of feminization of labour (work), focusing on their umbilical relationship and expression of the women's indigenous skill* which went unutilized. Unfortunately the women were found to adapt conventional tools, adopt bad posture, endure the drudgery of collecting, processing and profitless selling of the minor forest produce (only those accessible/permitted to them) – all portraying the livelihood status of the Irular women as those with a **hidden potential, less productively exploited**. They were not found to capitalize on their accessibility too – namely, access to forest resources. They lacked the skill to use the resources they had access to, to productive use by adopting advanced technology. Intervention was hence found necessary to address from simple mechanization of the process and onwards to make them more resourceful.

A majority of more than 25 per cent of men and women benefitted from the MGNRES 100 day employment scheme. There were benefits that they could access from NGOs, Magalir Vaazhvaathara Thittam (State Government Scheme for women's life enrichment), Namakku Naame Thittam (Scheme where people can choose and participate actively for self- gains) and a host of other Central and State Government Schemes/ Programmes. The settlement as such had not shown a pro- active interest in capitalizing from them.

All these project the **de-facto and de-jure status of empowerment** of the selected sample and the **subjective level of empowerment** they enjoyed. They are also reflective of the women's latent potentials and capabilities.

#### **Capacity and Competence for Action**

Capacity and competence project on potential factors directly enabling individuals and communities to act meaningfully to pursue their life styles - livelihood goals, related activities, knowledge systems, political participation and governance.

The sample's livelihood and related activities eventually were found to make phenomenal use of the natural resources available in the area. They benefitted from them for livelihood aspects, food, shelter, medicines and the like utilizing their indigenous knowledge and skills. The point to be focused was that they **never put them to profitable commercial use**; that is they used them only for **subsistence living**. Even farming done was only for subsistence living. Ignorance on technological advancements, lack of training in livelihood skills, low levels of literacy and economic status had a reverse effect on their enhancing capabilities.

Regarding political participation, none preferred to stand in elections, nor was much interested in casting their votes. **Though the area (Panchayat/ ward) was a designated constituency for women candidature in Assembly elections, the men never encouraged the women to take it up, neither were the women ready to take up.**

Even with regard to voicing their opinions/ desires, the samples were found to be highly reluctant. The mere fact that nearly **20 – 22 per cent of the settlement families refused to participate in the present study is ample proof for their reserved, voiceless existence**. They had a name sake local governance structure with a village head voicing unanimously for all the 300 odd residents. On this score **de- facto empowerment** was found to be abysmally poor. They had a host of Schemes proposed by the Central and State Governments which they could productively utilize for both personal and common (community) good (Appendix V). Legal instruments focusing on rights to contest in elections, to education, to information – none were approached to uplift themselves. An **innate lethargy** was the clout they preferred to adorn themselves with. The study found that there **were no takers for any welfare schemes**. The samples felt complacent if something – material or money - was handed over to them directly without their direct involvement to earn it. Of course they preferred money/ materials doled out or freebies to participating in welfare schemes for their well – being. Hence, the status of **de-jure empowerment** also was found to be very poor. Ultimately, their subjective levels of empowerment were drastically below expectations, projecting that bringing them to the mainstream would warrant a herculean effort from the part of the researcher. Moreover the scenario laid emphasis on **feminized poverty that posed a real challenge**.

#### **Connective Links – Cognition of Less Tangible Resources**

This has reference to the sample's concept of being with others in the environment and includes both tangible and intangible interrelationships individuals have with other

people and with nature, cultural values and identities. Such connections, unless very positive can affect human well-being especially social relations, health, inspiration and identity.

**Less tangible resource use** like social relationships, cultural and spiritual values which address human connections were given least significance. **The sample's interest in networking was very fragile.**

With maturity, individuals tend to value one's culture and identity more and more; this is referred to as **recognition domain**. The selected settlement did not claim any special cultural or spiritual identity. They were essentially eclectic, unlike other settlements. Contrarily, they belonged to the **primitive village in the Forest Settlement of Coimbatore Forest Circle** and were earmarked as **Irular Settlement**. Above all they have been categorized under **PVTG**. **They were not even aware of such their status and rarely voiced their demands for appreciable well – being.**

Intangible connections according to Breslow *et al* (2016) are capabilities, experiences, relationships and other social and psychological and cultural mediators of ecosystem's contribution to well-being. Under constituents of well – being these are referred to as **physical cognition**. Regarding this the findings revealed that the samples were aware about the entire environment, the resources they have, those accessible (regarding natural resources), and the like. They perceived environmental aspects, interacted with natural aspects and above all they lived there and enjoyed the pollution – free environment (contributory to healthy living – both physical and mental), knew about the diseases/ allergic reactions they may be prone to and had also endured a few. Being and enjoying the environment – scenic beauty of the forest area, living with abiotic and biotic elements were highlighted with true happiness. On a negative note, the sample's level of cognition on matters like the stress they endured in terms of physical and emotional insecurity (invasion by forest animals, rodents etc.), stress due to hilly terrain, fatiguing conditions, exposure to ambient climatic conditions with less protection, and poverty related competitions/disputes – all portrayed their level of less satisfying constituents.

Similarly their interest in networking and creating strong human relationships vested only within their tribal group (witnessed during family and religious celebrations) but never even extended unto the forest officials who could be of help to improve their livelihood options. They maintained an appreciable distance even with those philanthropist groups who visited them once in a while on social service motives and to offer material assistance.

## **Convergence - Domains Intersecting other Constituents**

Preference to cherish essential human values of security, sustainability, caring for self and others and yearning for satisfactory quality of life, which Breslow, *et al* (2006) had specified as inherent domains impinging directly on one's well – being were found to be pitifully ignored and least considered by the sample. From the findings of the study, it could be surmised that the settlement and the women especially lacked authority, information and pro-action in all the three constituents of well – being, namely context, capacity and competence and connective links - which reflected adversely on their diverse issues.

Evidently cues from these could be taken as pointers which acted as deterrents and determinants to their status of empowerment.

## **Analysis of the Deterrents and Determinants of Women Empowerment**

Detailed analysis of the constituents of well – being and the extent of satisfactory interaction sample's have with the geographical area and the people around highlight the stark realities of their inaccessibility to resources and lack of self-determination on their part. These factors of course deter their routes to empowerment and at the same time if taken up with sincerity can determine their empowerment prospects. The factors found to act as deterrents to their progress and prospects for transforming them into positive aspects are discussed under negative and positive situations.

### **➤ Negative Situations – Existing Scenario**

- **Nature of the settlement:** The settlement is a small scale social system, geographically isolated with limited and a tiring access from nearby township nearly 30 Km away. Transport facility is cumbersome and restricted. Though the tribe has a cultural identity, due to cultural diffusion, a dilution in their culture and interests have positioned them in an eclectic culture. They were not even sure about the system they followed – patriarchal or matriarchal. Feeling obliged to follow certain idiosyncrasies and superstitions, especially project the women and girls in a dismal picture.
- **Living style:** Social backwardness, low level of literacy, poor health condition, especially reproductive health, traditional values and customs dictated their present living style. Limited and location – specific livelihood options coupled with low level of economic activity made the situation more badly.
- **Illiteracy:** was a singled out contributory factor for their backwardness.

- **Means of Livelihood:** All the samples were found to be living on subsistence living. Women were not employed in gainful livelihood avenues, but were earning from alternative livelihood options like goat/ sheep rearing, cattle, collection of tamarind, amla etc. and engaged in distress selling. They had access to MFP, but lacked the knowledge and ability to market them. Nuisance from middlemen was a deterrent to take up trading seriously.
- **Traditional practices:** The samples were found to be complacent with rural indigenous technologies. A known skill is Arappu powder shampoo making, made adopting conventional processing methods and tools.
- **Ignorance on value addition:** Though, if marketed through proper channels the MFP, specifically the shampoo powder could match market demands. Ignorance about value addition of the product and commercialization of the product prevented them reach profitable markets.
- **Inefficiency in trading:** The samples lacked the necessary tactics and efficiency to commercialize products and showed their least interest to enhance production or make them tradable. Others factors include:
  - **Cognitive and infrastructural constraints**
  - **Financial constraints and lack of control over resources**
  - **Absence of institutionalized production and marketing of products**
  - **Weak linkages and communication facilities resulting in poor networking**
  - **Fragile village solidarity leading to dilution in interest about community welfare**
  - **Ignorance about their rights and privileges, laws for protection**
  - **Insecurity and timidity to negotiate with foresters**
  - **Inability to muster organized efforts for personal and communal good**

All these factors and even more acted as villains in the women's road to empowerment – **the deterrents**. These can be changed to engulf positive factors to determine women's empowerment with ardent efforts and creative minds. Those factors are enlisted below

- **Means to transform the situation into positive prospects – future Scenario**

To achieve this earnest efforts on the following lines have to be put in which lay greater emphasis on a **paradigm shift in the mindset of the people**, on the one hand and identifying the cross – cutting negative issues and transforming them into positive prospects which can lead to women empowerment in future by drafting a **problem tree and a solution blooms**.

**Prospects to change mind set of People – Realize their selves and Rights**

- **Establish status as a PVTG, settled within a reserved forest area, where they are entitled to access forest resources for their livelihood needs**
- **Demand for rightful inclusion in economic mainstreaming as they are earmarked as PVTG**
- **Shed idiosyncrasies and superstitions that deter progress**
- **Widen communication and networking**
- **Learn to adopt advanced appropriate technologies in livelihood issues**
- **Work for group cohesion and communal benefit**
- **Feel free to voice opinion and create a space for selves**
- **Dream for visibility and identity**
- **Marshall financial assistance as micro credit, loans etc.**
- **Comprehend and fight for rights**
- **Improve literacy level and wipe out ignorance**
- **Upgrade known skill for productive, remunerative endeavours**
- **Strengthen linkages and social networks**
- **Enhance communication and infrastructural support**
- **Participate in public forums**
- **Organize groups with a common objective/ focus**
- **Express will to be on par with men**
- **Produce marketable goods**
- **Undergo training on skill development and value addition of products**
- **Engage in constructive dialogues with various Institutions**
- **Become aware of Institutional support (Government, NGO, private, public) and benefit from them**
- **Welcome a change in living styles**

Sincere and ardent efforts from the women's side can definitely help change the situation which would determine the channels for their empowerment. Though at face value the deterrents seem to pose as highly unbeatable, they can all be quashed with ease only if the women samples wished to. It is clear that the environment for their empowerment is quite bright and with concerted efforts from all concerned, this state-of –affairs can definitely be upturned. What is expected is a changed mind set among the settlement dwellers to usher in a change in their living pattern. To make it realistic the specific problems they encountered had

to be identified with the source of their origin. With this in view an attempt to pinpoint the issues using a **problem tree analysis was done and a solution blooms was also drafted for active intervention**

#### **Problem Tree Analysis to Define Deterrents**

Analyses of the above factors revealed that the issue of women empowerment was deep rooted and had branched out, such that individual causes had to be defined, sorted out for possible solutions and then arrive at plausible avenues to thrash out all issues. To achieve this in the first instance, problem tree analysis was resorted to. This involved the following stages

#### **Stage.I. Base of the tree – Identifying the causes**

**Step 1.** The sectors or levels from which the causes originated were first found out. It warranted detailed discussions with women representatives from among the sample who volunteered to project the major problems they faced. Men folk among them also contributed and pointed out lapses in different levels which acted as major impediments like people themselves, operational level, , the institution, practices, supporting elements etc. Indicators relating to each impediment was identified which formed the root tips of the tree.

#### **Stage.2. Middle of the tree: Problem under analysis**

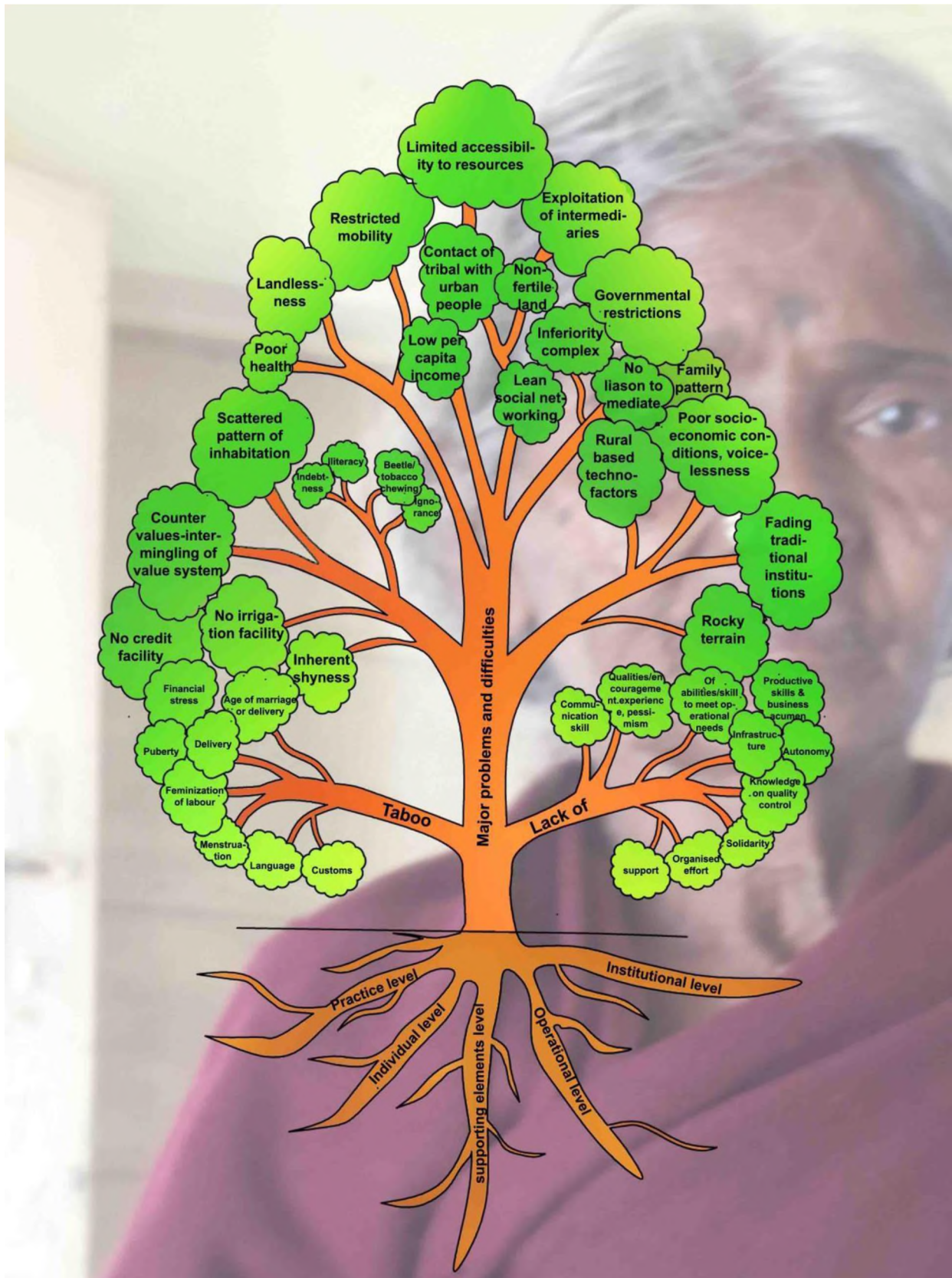
This portion basically highlights the problem for which the framework of the tree was drafted. In this instance, it was definitely – **Major problems and difficulties for empowerment**

#### **Stage.3. Branches of the tree – pointers highlighted the issues**

Next the sub – indicators corresponding to each major impediment was culled out which formed the branched roots of the tree. They defined the factors which prevented women's empowerment, and the subsequent impacts.

The factors identified as major impediments to the sample's empowerment was thus identified and are presented under the Exhibit (7).

Such an analysis helped to dissect the issues on a multi-pronged strategy, identify operational actors in the field, and delineate major aspects which have direct relationship with the problems, discuss both interconnected and contradictory factors, address real needs of beneficiaries and enable dealing with and identifying **present and pressing issues. This exercise was expected to help in** prioritizing actions based on immediate needs and aim for creation of a Win - win situation.



**Exhibit : 7 Problems tree analysis defining determinants to Women Empowerment in Senguttaiyur**

### Solution Blooms to Specify Determinants

In the light of the causes, the next step on how to help them mitigate such issues to emerge as empowered individuals was thought of. Probable solutions to come out successful in a win – win situation for both the researcher and the beneficiaries (sample women) was considered and a similar Solution Blooms analysis was done (Exhibit 8). Table presents details on the inroads created.

**Table: 49 Solution Blooms to Specify Determinants**

Source of problem	Measures to mitigate	Change expected/ outcomes chalked out
<b>Individual level</b>	<b>Motivate women to come out in to the mainstream</b> <b>Entrepreneurial intervention</b> <b>Skill development training</b> <b>Identify whistle blowers and trouble shooters</b> <b>Economic intervention to increase per capita income</b> <b>Network for good – livelihood options, resource access</b> <b>Philanthropic efforts</b>	<b>Improve well-being of the settlement/ women</b> <b>Enhance socio economic status</b> <b>Holistic Empowerment</b> <b>Changes in people’s lives</b> <b>Reduce feminized poverty</b> <b>Adopt alternate livelihood options</b> <b>Profitable enterprises</b>
<b>Institutional level</b>	<b>Motivational endeavours</b> <b>Medical and nutrition camps</b> <b>Enhance Civic responsibilities</b> <b>Instill good sanitation and hygiene practices</b> <b>Social networking – Anganwadi, PHC, hospitals, Gender related schemes</b> <b>Constitutional safeguards</b>	<b>Change in people’s participation</b> <b>Change in their sustainability of people’s institution and their activities</b> <b>Sensitize to problems related to women and community</b> <b>Attitudinal change in men to include women in decision making</b>
<b>Operational level</b>	<b>Networking – Government , NGOs, other stakeholders</b> <b>capacity building inputs</b> <b>Pinch in assistance of other functionaries for marketing etc.</b> <b>Extend infrastructural support</b> <b>Social protection (assistance)</b>	<b>Sense of solidarity</b> <b>Collective action</b> <b>Attitudinal change in women</b> <b>Expand skills/ potentials</b> <b>Self confidence</b> <b>Self-reliance</b>
<b>Practice level</b>	<b>Techno based training</b> <b>Form Self Help Group</b> <b>Start a CLG – a micro enterprise</b> <b>Activity pooling</b> <b>Promote alternative livelihood options</b> <b>Widen social networks</b>	<b>Incremental social interaction – widening network</b> <b>Productivity enhancement</b> <b>Enhanced managerial acumen</b> <b>Village cohesion</b>
<b>Supporting elements level</b>	<b>Start Bank accounts and initiate deposits</b> <b>Arrange for micro credit</b> <b>Install needed machinery</b> <b>Mediate in marketing</b> <b>Mediate to provide Housing</b>	<b>Women to change from dependent mode to self-dependent or independent mode</b>

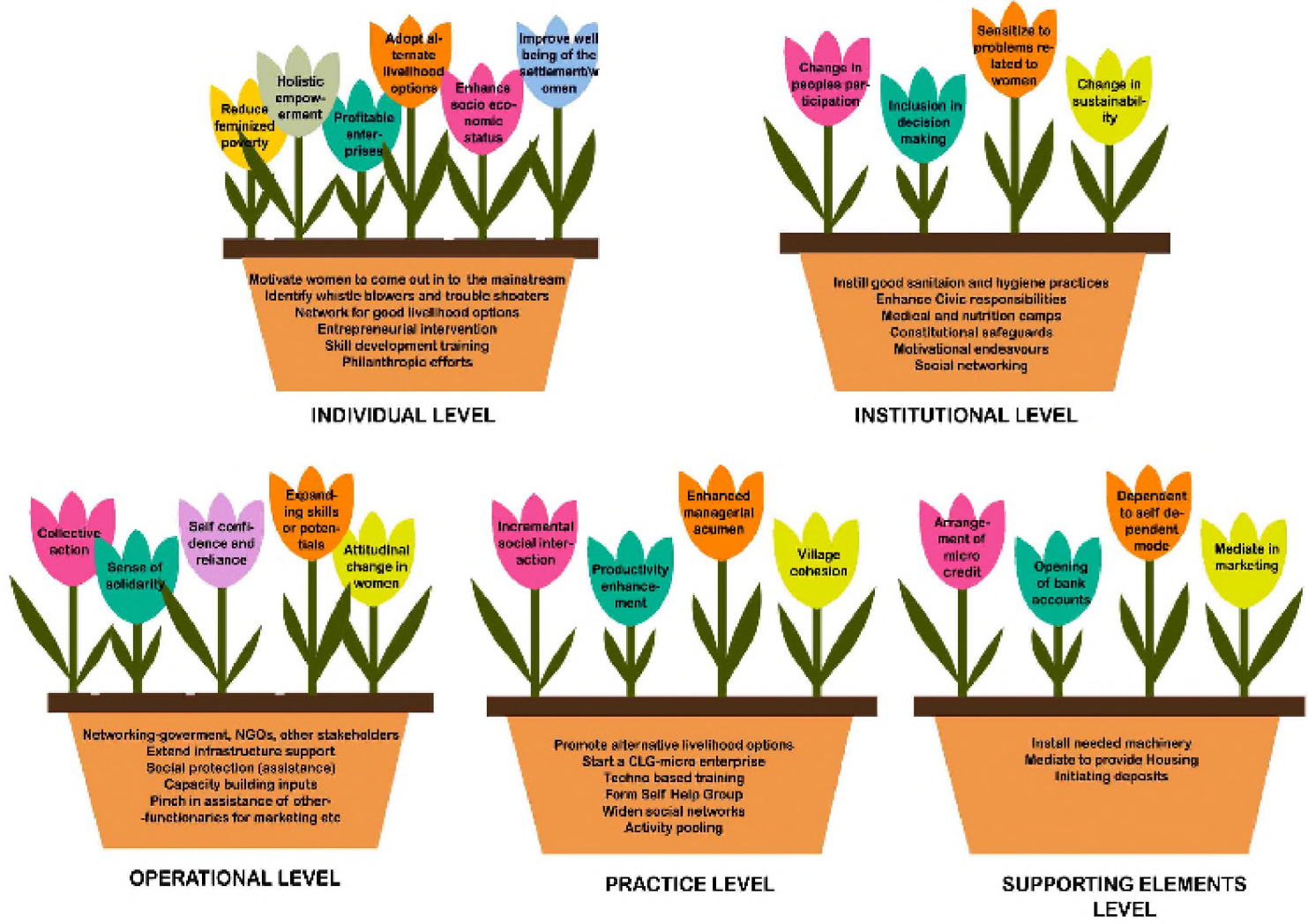


Exhibit : 8 . Solution blooms : Determinants of women empowerment

The analysis helped to thrash out visible problems by devising feasible proposals, if implemented could widen their options for quality – infused well – being, prospects for streamlining of which plans are delineated in the following Chapters

## Phase II. Conscientizing Women on Empowerment Strategies in the Social Milieu

The Nairobi conference (1985) introduced and defined the concept of empowerment as distribution of social power and control of resources in favor of women (Sharma and Varma, 2008). Virtually being a growth process, involving their intellectual enlightenment, economic enrichment and social emancipation was insisted on. With this backdrop, this part of the study on conscientizing women on empowerment was aimed to help the samples understand their selves, their limitations, and constraints and find solutions on their own to improve their status, self-esteem and self-image in the **social structure** they belonged to.

### Box : 18 Social Structure

Social Scientists define **social structure** as patterned social arrangements in a society which originate from and also determine individual's actions. They signify the system based on the scale of the structure:

**Macro scale:** deals with the system of socio - economic classification/ Institutions

**Meso scale:** concerns with the social network ties maintained between individuals or organizations

**Micro scale:** highlights the way the set norms shape the behavior of individuals within the system

Such norms are explained as the rules that prescribe what people should and should not do given their social surroundings and circumstances.

[https://en.wikipedia.org/wiki/Social\\_norm](https://en.wikipedia.org/wiki/Social_norm)

In the sociologist's point of view, **a family and the economy of a society/ community, both are social structures.** A social structure articulates social systems (economic, cultural) and reflects the uniqueness of a longstanding, interrelated social entity which influences both the operations of the entity as well as the individuals comprising it. The ideation behind forming social structures rests in forming regular social relations and evolving certain institutions based on groups, positions or different institutions. The same concept lays **restrictions and limitations on the way the individual members in the structure choose, act and interact in conformity to the norms existing in the environment** thus created. This would entail a **corresponding behavioural** aspect in them. Based on these facts this part of the study was organized with the following objective and the specific targets to instill self-empowerment strategies in the select tribal women on a **micro scale.**

#### D. Sensitizing Women to Empower Selves in their Social Structure – Normative type

**Jackson** way back in 1965 had stated that according to social norms' behavioral component, norms have two dimensions: how much a behavior is exhibited, and how much the group approves of that behavior. These dimensions can be used in normative messages to alter norms (and subsequently alter behaviors) as they provide chances for reflection. **Reflection** is concerned with thoughtful questions about something individuals want to understand, states Hibbert (2015). It deals with how far an individual will be able to remember events, persons involved in it, their role and the final outcomes. This sort of an exercise enables the individual

to open up his/her mind, introspect or self-inspect for their specific or general reactions to set norms and rules and do a little **critical reflection (Wilson, 2002)** by which they themselves can find plausible solutions. This part of the study therefore analysed, *the sample's status of reflection in the first stage and the responses to exposure as reflective, reflexive practices adopted through critical reflection in the second stage*, on the following lines:

##### **Stage 1: Realize Situational Constraints and Limitations**

##### **Stage 2: Energize Pro - active Participation**

##### **Stage 1: Realize Situational Constraints and Limitations – Outcomes of Reflection and Reflectivity**

The findings of the survey brought to light the **Social structure of the settlement** village (traditional, but not isolated, as stated earlier), followed an **eclectic pattern** of norms and rules which of course was abided by the residents. Family as a social structure and as an institution laid restrictions especially on gender related aspects and livelihood issues.

##### **Box: 19. Forms and domains of critical reflection**

- Personal -Thoughts and actions (self-inspection/ self-awareness)

**Personal reflection** involves recording one's own perceptions, judgments, reactions and behaviours in relation to an issue or practice (Mezirow, 1994; Finlay, 2002).

**Personal reflectivity** acts as a set of „filters“ such as past experience, feelings and mood, agendas and aspirations, that are brought to bear on any situation and influence resultant responses (Larrivee ,2000).

- Interpersonal - Interactions with others

**Interpersonal reflectivity** is the group dynamics and team working that influence decision-making in any given context.

- **Contextual** -Concepts, theory and methods

It leads to the question, how might things have been done differently if an alternative frame of reference or way of thinking had been used? (Weick,1999).

- Critical - Political, ethical and social contexts

**Critical reflection** happens by bringing into focus issues of power and examining subsequent limitations placed around thinking or practice (Riley et al., 2003). It

The samples were met through various means, because of the initial reluctance to meet the **investigator** and talk to her. The samples were found to lock themselves in the houses the moment they saw her presence in the settlement. Hence after sustained visits and bringing women out of their cocoon, entering into conversation explaining the purpose of the visit and cajoling them with freebies, details were extracted. Method of **reflection** extended from sheer **voluntary monologues by a few, dialogues, individual visits to houses, open meetings, opinion survey, meeting by village head, meeting by forest officers and organizing participative forums**, through which information on the settlement's features, rules and regulations, their attitude and behavioural patterns, reasons for being a marginalized group despite provisions from State and Central Government and local governance and the like were culled out.



### **Facilitating situations for Reflection**

The samples successfully underwent **reflection** exercises and were able to come out with their personal experiences, the limitations and constraints which were imposed and abided without voicing their personal opinions on very many **matters like** -

- **Mobility, decision making (home and settlement level), marriage customs (love marriage happened to a small percentage and remarriages were not encouraged), taboos related to puberty, menstruation, delivery and post-partum care, tattoo culture** and the like, details of which have been explained in earlier sections. This exercise of **personal reflectivity** enabled them to introspect and self-

inspect where they had lapsed, where their sense of freedom and to voice opinions have been denied and why they have been submissive to even factors that questioned their health, specifically reproductive health, safety and security.

- Finding access to educational institutions being distant, a majority had refrained from studying, contributing well to the **illiteracy status** of the settlement.
- **Their nature to accept material benefits (in cash or kind) without working for it was** also obvious.
- They never attempted to improve their plight by engaging in **gainful livelihood activities** which they had access to with a little effort to meet the concerned offices. All these projected their behavioural patterns which left their position quite pitiable in the society.
- Subsistence farming by men and livestock rearing, broom making and some such petty activities which did not fetch good returns was taken up by women
- They **rarely voiced for their requirements**.
- **Political participation** also was found to be dismal. Though the **area is designated as a women's constituency, neither the women nor the men had attempted to have a candidature from the settlement**. Definitely they would have had compulsion from political bureau to contest, but it is believed that they never intended to come to the forefront.
- It was clear that the restrictions/ constraints to their development and empowerment were more or less **self – imposed**. They were reluctant to crack the shell. But their living styles exposed that they had relaxed the rules in some contexts.
- On the **positive side**, a few men and women preferred the seasonal 100 days' work Scheme offered by the Central Government. Though it did not guarantee permanent income it showed a brighter side to their living.
- Women too were skilled in collection and processing of tamarind and collection and processing of an MFP hair wash powder. Inability and ignorance to techno based production and marketing left them hand tied not to see good returns. These helped to **get accountability on their capabilities and limitations** and at the same time make them think and analyze what had gone wrong for them enduring the present status. These facts necessitated finding out the aspects they had tried to deviate from and welcomed relaxation in the norms and rules. Hence, they were exposed to come out with the **reflective practices** that they had willingly accepted and adopted.

## **Rapport creation for strengthening friendly interactions and response - Reflectivity**

The researcher had organized interactive discussions by forming groups to meet predetermined objectives like initial rapport creation, visiting houses individually, participating in celebrations like Diwali and thus gaining their goodwill to transform them become extroverts. Such interactions made them come closer to the researcher and made them disclose facts about their conditions and capabilities. Such informal interactions facilitated the researcher to pin point to them where they had lapsed opportunities to empower themselves.



Another important endeavour which made the tribe women become friendlier is encouraging them to show off their indigenous skill of collecting and processing of **Alibizia amara** leaf hair wash powder. As a first attempt and to do a minor level quality control test, 20 kg powder was bought and was sold to 40 ladies in Coimbatore and the feedback received, which was very encouraging. Their happiness knew no bounds when told about the success of the sales and the handing over of the cash collected from sales. That was the initial step to success in the project taken up. The endeavour was felt highly encouraging and helped them to reconsider their actions.

The process of learning through and from experience towards gaining new insights of self and/or practice (Mezirow, 1981, Boyd and Fales, 1983; Boyd *et al* 1985; Jarvis, 1992) referred to as **reflective practice** was quite evident. **They started examining their everyday practice which paved way for a process of life-long learning.**

### **Box:20 Reflexivity**

Giddens (1990) considers that reflexivity to be concerned with relationships between knowledge and social life, projecting that, as traditional frameworks of society dissolve, new patterns of identity emerge, forcing people to live in a more open or „reflexive“ way. He therefore, thinks that all are engaged in some level of reflexive practice every day, even if unconsciously, in that one makes choices and reacts to the world in which one lives, as they constantly respond and adjust to the changing environment around them. Even the small choices made in one’s daily lives, such as what one wears, eats, how time is spent, health care etc are part of an ongoing process of creating and recreating one’s reflexive self-identities or, rather, positionalities

Organizing visit by Rotary Inner

Wheel members and their philanthropic contributions further added trust on the investigator and her initiations. Such a transformation in the sample women was a genuine case of **reflectivity**, as they tended to reflect upon the ways their own assumptions and actions

influenced a situation, and thus changed their practice as a direct result of this reflective process (Argyris and Schön, 1974). The researcher in a way had acted as a facilitator to help them come out of their shells. Once a spark was lit to understand themselves and the constraints they faced, they started questioning themselves – a clear case of **reflexivity**. According to Holmes (2010) reflexivity refers to the practices of altering one's life as a response to knowledge about one's circumstances.

**Evidences of Reflexivity:** Reflexivity enables individuals to position themselves in the social context and appreciate one's own self influences. The samples agreed to have learnt from the circumstances presented to them and had changed their behaviour and attitudes to suit present conditions as Giddens (1990) and Cunliffe (2009) point out in their observations.

Monthly visits to the town by the men especially and women to buy groceries had exposed them to newer trends in eating, clothing, communication and the like and had provided opportunities for the samples to imbibe those cultural changes. Similarly presence of a small petty shop in the village and the street vendors selling delicacies and such other consumer items along with advertisements seen in television were added inputs. All these had inflicted changes in their living styles evident in their eating, clothing habits etc. (Exhibit: 9). Above all the settlement enjoyed ration from Public Distribution System (PDS) which supplies mainly rice, wheat, refined sugar etc. which were uncommon till two/ three decades ago.

- **Visible Changes**

- ✓ Eating habits had hence changed from inclusion of varieties of millets like ragi, maize etc. to rice as staple food with the delicacies and curries popular among urban and rural people.
- ✓ Exposure to bakery products and preserved foods was another feature noticed.
- ✓ Have become accustomed to breakfast (earlier it was only Ragi balls), and tiffin items like puri, chapathi, idli, dosa, upma etc.
- ✓ They had become used to consuming tubers, vegetables and fruits not grown in home turf.
- ✓ Refined sugar, a delicacy of urban/ rural areas was available for their use through the PDS.

- ✓ Learnt to make and eat delicacies in Non vegetarian foods.
- ✓ Started wearing footwear.
- ✓ The women wore sarees, nighties, salwars etc. and the men wore pants and shirt unlike their traditional costumes.
- ✓ They spoke in Tamil, the regional language, other than their dialect – Irula and could correspond well with others.
- ✓ For communication nearly 30 people had a mobile phone.
- ✓ A few of them owned a two wheeler for ease in commutation.
- ✓ They were used to labour saving devices (Mixie, grinder), luxury items (fan) and entertainment goods (TV and transistors).
- ✓ They were aware of immunization and vaccination benefits and approached the hospitals/ clinics for the same (Child care, Pregnancy care etc.).
- ✓ Women were aware of sanitary napkins and procured supplies from the Anganwadi from which they need to collect.
- ✓ Preferred Allopathic medication and institutional care for deliveries.
- ✓ All of them possessed Ration card, Aadhar Card and Voter ID.
- ✓ Worshipping deities and festival celebrations.
- ✓ Improved bathing practices and frequency.
- ✓ Started using soaps and few cosmetics.
- ✓ Using tooth brush.

**Evidences of Reflexivity**



Dress Code Wearing Nightie



Consuming Sweets and Savouries



Exposure to Bakery Products



Consuming Tubers



Mobile Phone Communication



Using Tooth Brush



Using Sanitary Napkin



Television



Adding Rice in Ragi Kali



Cooking using LPG Gas Stove



Plastic Pots and Stainless Steel Utensils



Using Mixie Grinder



Hospital Care



Bathing More Frequently



Identity Card



Two Wheeler

**Exhibit :9 Visible foot prints**

**These self-declarations have thus proved reflexivity to include both a subjective process of self - consciousness inquiry and the study of social behaviour.** The samples were found to exhibit their experiences of reflection and reflexivity which are proof of their critical reflection behaviour. Finlay and Gough (2003) find it helpful to think of these concepts forming a continuum. At one end stands reflection, defined simply as „thinking about“ something after the event. At the other end stands reflexivity: a more immediate and dynamic process which involves continuing self-awareness. Critical reflection lies somewhere in between.

To enlighten the samples further on who they are, their identity and the rights and privileges they are entitled to various meetings were organized in their favour inviting guest speakers of repute. The effort was taken up not only to introduce the concerned actors in the field who may be of help to the samples but also to pitch in the stakeholders who may receive mutual benefits. The significant meetings organized (Exhibit) included those listed in Table (50).

**Table 50 : Stakeholder support for Awareness Generation**

No	Name	Designation	Subject	No. of Beneficiaries
1	Mr.Mathew.N	President, Irular Ina Makkal Kuttamaippu,	Rights of tribals over forest produce `	25
2	Mr. Radhakrishnan.P	Counselor , Jan Shikshan Sansthan,	Life Enrichment Skills	25
3	Ms.Xochotil	Social Worker, Mumbai	Group dynamics and leadership skills	18
4	Dr. K.T.Parthipan	Professor& Head, Dept. of Agro. Forestry, Forest College& Research Institute, Mettupalayam, Coimbatore	Collection of MFP	25
5	P.Balasubramaniam,.	Professor (Agrl .Extn.), PI of the Project, Dept. of Social Sciences, Anbil DharmalingamAgrl. College& Research Institute (ADAC&RI), Trichy	Training and Skill Development of Tribal Community	60
6	Mr.C.PalaniRaja,	Ranger, Coimbatore Forest Circle, Perianaickenpalayam, Range, Coimbatore	Safety inside forest area and damages caused to crops during collection of MFP	60
7	Dr.K.K.Suresh	Professor & Dean Forest College and Research Institute	Importance & Economic Value of NTFP	60
8	Dr.Sudhakar	Professor (FS&N), ), Post-Harvest Technology Centre (PHTC), TNAU, Coimbatore	Scientific method of , Collection and processing of Non-Wood Forest Products	50
9	Dr. D.Malathy	Professor (FS&N), Post-Harvest Technology Centre (PHTC), TNAU, Coimbatore	Value added products from Amla	50

10	Dr.Kumaravadivelu.P	ICAR Kishi Vigyan Kendra , Chief Scientist, Coimbatore	Value addition, branding, packing and labeling of MFP	26
11	Mr.Ramanuj Banerjee	Scientist, Department of Science and Technology (DST), New Delhi	National Level Marketing Strategies	18
12	Mr.Selvarasu.K	Project Officer, Tamil Nadu, Mahalir Thittam Project	Importance of quality assessment certification,	14
13	Ms.Nithya,	Marketing Manager, Tamil Nadu Mahalir Thittam Project,	Accounting, banking and sustainability of the SHG projects	5
14	Mrs.Nirmala Natandakumar	Rotary Inner Wheel President	Quality Maintenance and best price of value added MFP	40
15	Mrs.Jayanthi Manohar	FICCI FLO President	Marketing of tribal products at city and state level outlets.	28

Taking these findings as encouraging cues for further action, the next stage was embarked on.

### **Stage 2: Energize pro - active Participation**

The meetings organized in Stage 1 tried to instill values of cohesion, collective participation and basic life skills concepts. While dealing with normative analysis Crick (2001), argues that, because the act of participation provides people with life skills which enable them to function more effectively as individuals, participation itself creates value regardless of any defined output of the participation process. Yet considering the gravity of the issue and the individuals concerned it was decided to expose them to more serious participative endeavours which in the long run can transform them with added civic, economic, and social responsibilities. With this backdrop this part of the programme was scheduled to include the following agenda which capitalized on numerous mass attraction measures:

#### **D.2.1. Motivation to Become Self Reliant**

#### **D.2.2. Instilling Leadership Qualities**

#### **D.2.3. Creating Visibility**

#### **D.2.4. Rapport Creation for Healthy Networking**

**Motivation to Become Self Reliant:** The measures to motivate the samples included lectures, motivational talks, counseling sessions and campaigns on the following lines:

- Meeting of all village people and researcher at Senguttai, with President, Irular Ina Makkal Kuttamaippu, Velliyangadu panchayat

- Visit by FICCI FLO members, talk on livelihood opportunities in Senguttai
- Counseling village women on entrepreneurship and Self Help Group
- Develop confidence and awareness among women regarding women's status, health, nutrition, education and empowerment
- Signature Campaign, few members who are illiterate were trained to write/ sign their name or keep fingerprints



**Plate :5 Signature Campaign**

**Instilling Leadership Qualities:** These were aimed at promoting mobilization of women for group cohesion and thereby show a pathway for personal empowerment and the methods adopted included talks, demonstrations, visits by leaders and counseling sessions, as listed below.

- Scientific Collection & Processing of Non-Wood Forest Products
- Processing & storage of Non- wood forest products
- Tribal women Empowerment through value addition of Non- wood forest products
- Counseling by Ranger, Coimbatore Forest Division on entrepreneurship and forest resources and counseling on group dynamics and leadership skills

**Creating Visibility:** Subsequent to ardent efforts to bring the samples to open forum and instill in them qualities of active leadership, the next step was to create opportunities for their visibility. The activities taken up to succeed in this venture , such as sales/ bidding experiences, submitting signed petitions/ minutes to Officers, face to face with political leaders, field visits, participation in exhibitions/ fairs and the like were lined up.

- First Sales of tribal products in village to President FICCI FLO
- Sale of Tamarind to merchant

- Theermanam by Forest Ranger and SHG in presence of Forester, Guard, Watcher, people of Senguttaiyur and Poolapathy village for taking auction of Tamarind trees for an amount of Rs.5000 /-



### Auction of Tamarind Trees

- Co-ordinated visit of Mr.A.K.Selvaraj, Member of Parliament, Rajya Sabha, to the village and requested him for bulk marketing of tribal forest produces (Dec 2016)
- Took **seven women** from Senguttaiyur SHG to Kotagiri, for market mela organized by TRIFED (Tribal Co-operative Marketing Development Federation of India Ltd) at Nilgris Adivasi Welfare Association (NAWA) at Kotagiri (Feb 2017).
- Facilitated meet of tribal women with Hon“ble. Minister for Agriculture Mr.Pon Radhakrishnan, exhibit of village products
- Displayed products at Coimbatore District Collectorate on the occasion of “Manithaneya Vaara Vizha” by Adidravidar and Palankudiyinar Nala Thurai
- Participated in Kalaivizha stalls at Avinashilingam Institute for Women, Coimbatore.

**Rapport Creation for Healthy Networking:** After introducing them to places not much known before, the samples were initiated to people (Plate) who could really assist in their development (social, economic, entrepreneurial and psychological) and empowerment.

- Creating rapport with the people of Senguttai village, with Forest Department Officials, Coimbatore District - Conservator, Asst. Conservator, DFO,Ranger, Forestor, Watcher, Guard
- Co-ordinated visit by Forest Range Officer, Project Co-ordinator, Magalir Thittam, SHG co-ordinator, SHG produce marketing co-ordinator, State Rural Livelihood Mission
- Co-ordinated meet of women from Senguttai at Krishi Vigyan Kendra, Vivekanandapuram, Karamadai for orientation of Training Programme
- Local Bank Manager for starting an Account

- Proprietors of various supermarkets, malls for sale of products



**Plate: 6 Rapport Creation to energize action**

All these attempts set the stage for the next important venture – intervention programmes to make the samples really empowered.

### **Phase III: Facilitating Connections and Capabilities through Capacity Building**

**Reflexivity** is a pathway to **connectedness**. Connectedness can ensure **accessibility**. To facilitate connectedness, participation in itself is considered a **normative component**. In this regard Fiorino (1990) had identified three justifications for increased participation in civic society (that itself being a key component of empowerment) as: (i) **Normative**: by virtue of being good in itself; (ii) **Substantive**: as it can make things better and (iii) **Instrumental**: because it achieves certain goals. These three with their rationale are the **drivers of participation**. Any attempt at facilitating connections and capabilities should consider these aspects as guidelines. This aspect literally focused on that. Hence, this part of the study analyzed the measures to galvanize action in the samples under the following major heading:

#### **E. Development of Potentials–In roads to Empowerment and Improving accessibility**

Intervention programmes to facilitate development of potentials was the real time endeavour chalked out to enable empowerment and accessibility in the concerned sample. The concepts of „capacity“ or „capability“ which Alsop (2005) had introduced are in addition more crucial to one“s understanding of the empowerment process. For achieving the objectives of capacity building and capability enhancement, inputs that are expected of was

motivating self-mobilization and connectedness in the sample population, which in the viewpoints of Simmonds and Birchall (2004) promise individuals participation in joint analysis, develop action plans and would form and strengthen local cohorts or institutions. Taking cues from these guidelines the agenda for intervention programmes was charted to adopt the following schedule:

### **Development of Technical and Functional Skills**

#### **E.2.Facilitating Leadership Development**

#### **Real Time Training and Skill Development**

#### **Enhancing Practical Skills and Networking for Social and Psychological Empowerment**

#### **Infrastructure and Support Extended - Creating an Enabling Environment**

#### **E.6.Sustainable Community Strategies**

### **Development of Technical and Functional Skills**

Mobilizing the women to develop technical and functional skills **aimed at their substantive empowerment**. Hence the activities were streamlined on the following lines:

#### **Focus on Skill Development for entrepreneurial empowerment**

The socio economic survey and subsequent studies had highlighted the major two indigenous skills the women were adept with, namely preparation of a Herbal (organic) hair wash powder with a Minor Forest Produce (MFP) and collection and processing of tamarind, a Non –timber Forest product (NTFP). It was easily and freely accessible from the forest as the samples belonged to the tribe whose settlement is a village in the Reserved Forest Area. Due to their innate shyness, timid nature and reluctance (coupled with ignorance) they never found them easily accessible. It emerged as an **untapped virgin potential**. Frequent visits by the researcher to meet forest officials and concerned departments guaranteed easy access to the MFPs. With this success story endeavours to motivate the women to agree to attend **preliminary round ups on skill development** was initiated(Exhibit 10). The programmes charted out included talks, lectures, demonstrations, field visits and motivational activities to bring them into the lime light. The programmes successfully carried out are listed below and illustrated in the Box (21) and Plate (7) **Two one day programmes** to motivate and mobilize the cohort to become aware of the resources they have rights to access was organized in collaboration with KVK and ICAR Water and Soil. Further one day training was facilitated on capacity building program organized by NAWA and TRIFED in Kotagiri. Two men and seven women of Senguttaiyur attended the training program.

These basic interactive sessions, duly attended by the select women tribal enabled them to come out of their timidity and express their opinion and later willingness to participate in the training programmes scheduled in the next stage.



Awareness on Modern Technology



Rights to Access of Non Timber Forest Produce



Bee Hive training at KVK



Importance & Economic Value of NTFP



Awareness on Entrepreneurship and forest resources



Importance of Bulk Marketing



Display and Sales at TRIFED



Awareness on National Level Marketing thro' TRIFED



Training in Goose berry Value added products



Modern techniques for production Arappu powder



Modern techniques for Dehusking and De-seeding Tamarind Fruit



Solar Drying Technique

**Exhibit : 10 Focus on Skill Development for Entrepreneurial Empowerment**

## **Facilitating leadership development**

After stimulating the samples to realize their self-potential and motivate them for better prospects on known skills through technology – infused training, the next step was to instill in them the benefits of being and doing together – **team spirit for collective good**. **Developing leaders** in an isolated settlement which had never tasted the fruits/ essence of leadership before was a herculean task. Moreover, the aim was to **incorporate the instrumental component of empowerment** in the endeavour as it enables achieving certain goals. Hence this part of the study included the following stages:

### **Group Cohesion – Forming a Self Help Group (SHG) for Social Empowerment**

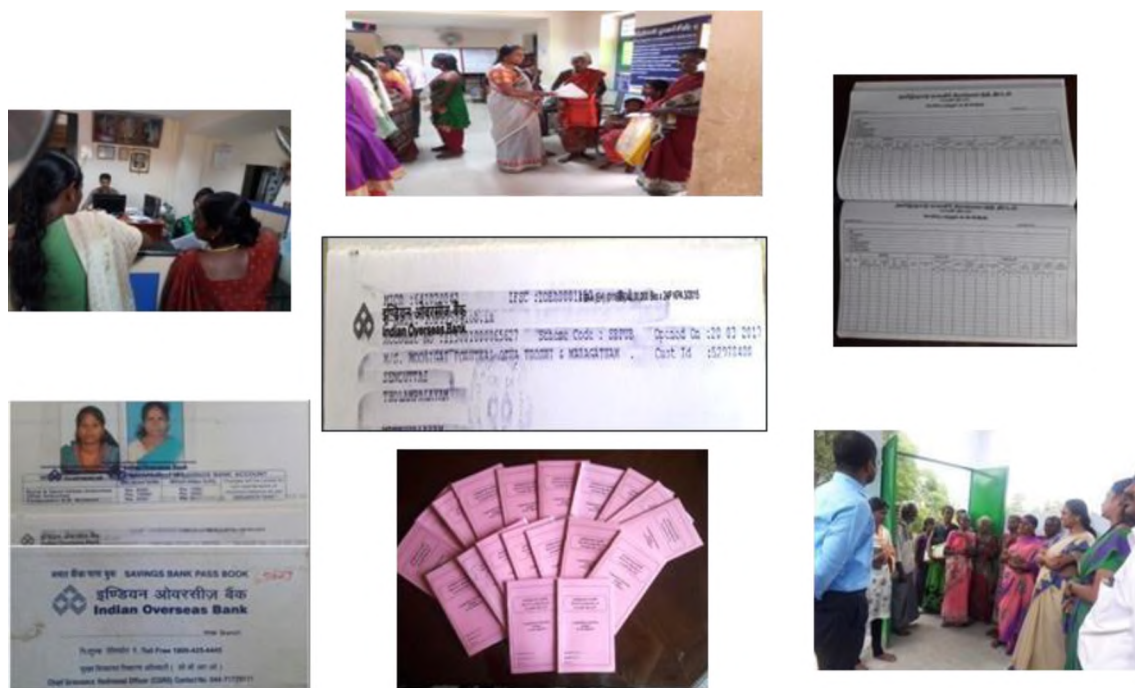
### **Initiating a Common Livelihood Group (CLG) for Personal Empowerment of Tribe Women**

### **Group Cohesion – Forming a Self Help Group (SHG) for Social Empowerment**

An SHG typically comprises a group of micro entrepreneurs having homogeneous social and economic back grounds, all voluntarily coming together to save regular small sums of money, mutually agreeing to contribute to a common fund and to meet their emergency needs on the basis of mutual help. They pool their resources to become financially stable ([https://en.wikipedia.org/wiki/Self-help\\_group\\_\(finance\)](https://en.wikipedia.org/wiki/Self-help_group_(finance))). Initiating formation of a Self Help Group (SHG) in the selected settlement involving the select tribe women included the stages listed in the Box (21) and the Plate (7).

#### **Box :21 Initiating a Self Help Group in Senguttaiyur**

- Visit by Project coordinators of SHG under State Rural Livelihood Mission
- Encouraged the women for Group Formation
- Visit by Project coordinators Ms. Kavitha and Ms. Thulasi to village for formation of SHG under State Rural Livelihood Mission (Jan 2017) – 20 women
- Gave forms to women to be filled up for opening bank account
- Collected Adhaar Card details from women for opening SHG bank account
- Visit by Thulasi Project Coordinator for opening of Bank Account (Feb 2017)
- Handed over Bank Pass Book to SHG Treasurer
- Handed over Daily Cash Ledger, Savings Ledger to Secretary of SHG
- Handed over Individual Savings Loan Note Book to all SHG members



**Plate. 7 Activities Aiming at Economic Empowerment of Women – Forming a CLG**

### **Initiating a Common Livelihood Group (CLG) for Personal Empowerment of Tribe Women**

Forming a Self Help Group exclusively for Senguttaiyur village women was envisioned as a **gender-friendly delivery mechanism**, which could **ensure group cohesion** on the one hand and **promotion and up gradation of the indigenous traditional skill** of the women in the settlement on the other. To this effect woman in the settlement were mobilized to join hands and form a group which could be **economically and psychologically beneficial to the members** and also enable **social empowerment** at large. **The SHG “Poocharam Mooligai Porutkal SHG” was thus formed enrolling 20 willing women and appointing three key members as office bearers. Necessary action to start bank account in the name of the SHG was taken up.**

Convergence of Mahalir Thittam( Women’s Project )Puthu Vazhvu Project Mahalir Thittam(New life womens project) is being implemented in Vazhndhu Kaattuvom Project Blocks(Povert Reduction Project Program)through the project staff and village poverty reduction committies (VPRCs).Common Livelihood Groups (CLG) is a nrew concept introduced by TNSRLM-Tamil Nadu state Rural Livelihoods Mission. *The individual members who are involved in the same activity are being clubbed together to form a CLG.*

Inviting **Government officials** to the village to formally form the SHG was well received by the group members and lent an added attraction to the community at large. The attempts prompted further action to strengthen the SHG.

### **Initiating a Common Livelihood Group (CLG) for Personal Empowerment of Tribe Women**

Creating viable livelihood options capitalizing on existing capacity and capability of samples in the select locale is a step to success as far as empowerment studies are concerned. In this study, that was made possible by roping in active stakeholders to initiate / establish a CLG, registering the same and channelizing action for progress on the right path, was envisioned on the following lines.

- Filing online application and receiving **Udhyog Aadhar Certificate from Ministry of Micro, Small and Medium Enterprises and registering the SHG** under the name „**Senkuttai Herbal CLG**“
- Meeting of SHG women and minutes recorded on decisions to take up Organic (Alibizia Amara leaves) **hair wash powder making as the first livelihood activity** by the CLG and proceed with purchase of pulverisers
- Inviting the Machine operator from a reputed Mill to demonstrate operation of pulverisers and explaining possible technical snags that may occur during production process
- Meeting of SHG to discuss **Tamarind project as the second livelihood activity** to be taken up by the CLG and recording minutes in SHG report
- Deciding to take up **machine grinding (making flour) of other grains and millets like rice, wheat and ragi as third livelihood option** by the CLG
- Submission of a detailed report with quotations to Project Director Magalir Thittam for permission and sanction of funds
- Deciding to take up **machine grinding (powdering) of other grains and millets like rice, wheat and ragi as third livelihood option** by the CLG
- Submission of work shed and machine details to Electricity Department requesting three phase power supply ( Plate: 8 )



**Plate : 8 Eco-based Resources and Products –Livelihood Activity of CLG**

Thus a concrete step to form a unified, homogenous group with common understanding and goals was successfully achieved. The objectives put forth could be arrived at without any hitch by involving many stakeholders. The list is presented in Appendix (VI)

**Real Time Training and Skill Development:** The tribe women are nature proxies in that they knew the tactics of collecting and processing organic, eco-friendly wealth from waste – the indigenous hair wash powder with the locally available leaves of *Alibizia amara*, a native tree of the reserved forest area, where the women belong – a genuine case of „**Psychologically and culturally related connections**“. They definitely claimed belongingness and an umbilical relationship with the nature and eco system prevailing in the forest area and their settlement. **Naturally they could not be pulled out and taught a skill unknown or less known to them.** Hence it was decided to embark on training programmes which could make **employment of the same skills easier, less cumbersome but advanced in technology and fetching more monetary returns.** The **training schedules** included:

- Selection of Tribal Resources for Entrepreneurship
- Collection of *Alibizia amara* Leaves and Drying Using Solar Dryer
- Collection of Tamarind Pods
- Hands-on Training in Operation of Tamarind De -seeder Machine

- Training on Scientific method of solar drying de husking and deseeding of Tamarind seeds
- Skill development for value addition in technology inducted Arappu powder making (Alibizia amara)
- Training on use of accessory implements like weighing scales, packing & labeling machine etc.
- Education on product branding in the name of “Avinash Herbal Hairwash powder” and “Avinash Deseeded Tamarind”, quality control, packing and attractive labeling
- Value addition of Gooseberry or Amla (both skill orientation and demonstration)
- Training workshops on logistic control of enterprises
- Finalize best quotation and confirm delivery, payment terms and conditions, guarantee, warranty
- Bidding in auction for contract of tamarind trees conducted by Coimbatore Forest Division
- Work allocation for labour (collection of leaves and processing of Alibizia amara)
- Work allocation for labour (de-husking, de-seeding and packaging of Tamarind)
- Exposure to city markets, departmental stores, city center mall and organic products sales outlets



**Exhibit:13 Training Programmes Attended by tribal Women**

The women participated ritually in all the training programmes (Exhibit 13) as they were very sure that they could improve their status if they underwent the exercises. They knew very well about the opportunities awaiting them and were all the more happy to access the local but their rightful resources to flourish in their endeavours through the use of modern technology rather than the cumbersome manual process. These efforts have instilled **substantive component of empowerment** as they have **succeeded in making things better for the tribe women**, the real beneficiaries

**The training given and assurance made for procuring machinery to powder herbal leaves, stimulated the women to embark on one more CLG activity, that is powder grinding (flour making) of rice, wheat, ragi and the like** which they consumed regularly and for grinding of which they had to approach only the mills in the panchayat village at Tholampalayam – a drudgery and laborious task disliked for the lack of adequate transport facilities, carrying of loads and high cost. This has been a bonus achievement in the research work.

By adopting such a strategy the following **mutual benefits** could also be achieved by all **stakeholders**

- ✓ **Respecting traditional skills**
- ✓ **Protecting a skill, thereby not letting it out (can even patent it in future)**
- ✓ **Enabling security in economic, social, psychological inputs and outcomes**
- ✓ **Value addition to sustainable resource use technology**
- ✓ **Ensuring well – being of entire community**
- ✓ **Preserving the sacredness/ sanctity of the forest resources**
- ✓ **Options for creating wealth from waste**
- ✓ **Reviving an abandoned indigenous skill and a healthy practice**
- ✓ **Joining hands in the management of forest resource**
- ✓ **Environmental cleanliness**
- ✓ **Gainful engagement of time as a resource**
- ✓ **Abiding to the Nation’s call on skill development for economic gains**
- ✓ **Livelihood opportunity for many families in own village through indigenous sources which rightfully belongs to the tribal settlement**

### **Enhancing Practical Skills and Networking for Social and Psychological Empowerment:**

Two vital processes have been identified as important for empowerment. The first is social mobilisation and collective agency, as poor women often lack the basic capabilities and self-confidence to counter and challenge existing disparities and barriers against them (Gaur *et.al*, 2007). Often, change agents are needed to catalyse social mobilisation consciously. Second, the process of social mobilisation needs to be accompanied and complemented by economic security. As long as the disadvantaged suffer from economic deprivation and livelihood insecurity, they will not be in a position to mobilize. Empowerment means a psychological sense of personal control or influence and a concern with actual social influence, political power and legal rights (Mir and Tiwari, 2017).

To instill self-confidence, informed buying habits, grading/ selection and bargaining, the following endeavours were taken up with active participation of the SHG women. The activities included the following:

#### **Exposure to Manufacturing units of machinery**

##### **Exposure to bidding auction and External markets for tamarind selling**

**Exposure to Manufacturing Units of Machinery:** This aspect of involving the sample women in empowerment endeavours included the following steps:

- **Survey of the Industries:** To familiarize the women to the markets which sell machinery for undertaking their CLG activities, they were taken to the local manufacturing units belonging to the industries. A three member team visited the industries. Survey of the units manufacturing their requirements was identified and an extensive scanning of the products, purpose of the machinery, comparison of cost, capacity, power consumption, aesthetics, and space required for installation and the like were discussed. Their active participation in the discussions was made mandatory citing that they would be the end- users. They visited more than three industries and obtained quotations from three manufacturers of the machinery. Such treatment as active buyers was quite new to them. Hence they enjoyed the survey experience along with making the final selection of the machinery for purchase. (Plate 9).

- **Submission of the Proposal:** Subsequent to obtaining the quotations, a proper proposal was drafted and the same was submitted to the Project Officer, Magalir Thittam, attaching the quotations for his approval.

- **Placing Order and Buying:** On receiving approval from the Mahalir Thittam office, the women were accompanied to the manufacturing unit (for whose quotation approval was obtained) making the machinery. After choosing the machines, one for herbal powder making and another for flour making, cheque leaves ensuring payment of the cost of machinery in two installments was handed over by them.



**Plate:9 Informed Decision making– Buying and Selling**

#### **E.4.2.Exposure to Bidding Auction and External Markets for Tamarind Selling**

The survey revealed that the samples were efficient to process and clean tamarind for ready consumption. The survey also exposed their plight of not bidding auctions on their own from the forest department but acting only as contract labourers under contractors who regularly bid in auctions.

**Bidding in the Auction of Tamarind Trees:** Following persistent advice and the several counseling sessions insisting their rights to proceed with it, they agreed to bid in the auction held in 2018. Unlike their earlier experiences where they were given a few Kilos of tamarind after contractors took the entire lot for a meagre cost, this was an innovative endeavour.

They were obtained after getting **permission from the forest authorities to bid in the auction**, where they bid and **got sanction of all the tamarind trees for taking the MFP at a cost of Rs. 5,000 /-.**



- **Processing of Tamarind:** Men from the settlement were involved only in plucking pods from the tree, loading and transporting of tamarind from the forest area and to the CLG unit. Involvement of men stopped at this level. Further processing of tamarind like drying, de-husking and de-seeding was done exclusively by the SHG members as **a collective action**. This not only made the work interesting and easier but also proved time saving.

- **Selling the Tamarind:** Unlike early experiences, the samples were motivated to talk and deal directly to buyers, thus, eliminating nuisance from middlemen and intermediaries who in fact were responsible for their plight. Moreover selling the products after grading, packing and labeling catalyzed both the selling and buying process.

- **Expanding Reach:** To enable widening of their market potential, a six member team was introduced with the product to two popular shop owners. The samples spoke business and benefitted from the sales proceeds.

Such evidences of **transformation** are quite self-explanatory to show that the samples were willing to change to empower themselves socially and psychologically and enhance their status.

## **Infrastructure and Support Extended - Creating an Enabling Environment**

For successful, hitch – free implementation of any action programme providing enabling environments with appropriate and adequate infrastructure is a pre requisite. The next apprehension was to marshal funds and other material inputs to meet all exigencies related to the management and running of the CLG. It was indeed a proud moment to know that after persistent requests to bring in an amicable atmosphere the set target had been achieved. With this in view, considering the three plus one livelihood activities willingly taken up by the CLG, and to enable active participation, provisions for purchase, delivery and installation of the necessary infrastructure was made as explained under the following aspects:

### **Supportive Input Provisions Materialized for Establishing and Promoting CLG**

#### **Gearing Stakeholder Involvement for Marshalling Funds –flow**

#### **Assign Spearheading of CLG Accounts for Economic Empowerment**

#### **Supportive Input Provisions Materialized for Establishing and Promoting CLG:**

Sheer starting of a SHG and a CLG under it, does not suffice to empower the enrolled women. The CLG has to be supported in terms of infrastructural facilities, machinery and supportive services for its productive functioning. The project objective is to empower the poorest of the poor, the marginalized and the differently abled and to promote sustainable livelihoods for them. Frequent knocking at the doors of concerned Governmental Offices helped materialize the needed support as explained under the Table 51.

**Table: 51 Supportive Input Provisions Materialized for Establishing and Promoting CLG**

Common Livelihood Group (CLG) project	Activities	Support extended		
		Infra structure	Machinery	Services
Herbal (Alibizia amara) Hair wash powder	Collection, grading, drying, powdering, packing, labeling, storing	Room	Pulverizers (2) Electronic weighing scales Sealing machine Electrical items for power supply (meter / switch board)	Three phase Power supply at subsidized rate Labels and packing material
De-seeded Tamarind	Collection, drying, de-husking, de-seeding, drying, packing, labeling	Room	De-seeder machine	
Processed Gooseberry (Amla)	Collection and processing	Room	Large vessels , bottles	
Powdered cereals/ millets (Flours)	Drying, cleaning and powdering	Room	Appropriate plates/ vessels/ strainers etc.	Packing material

Infrastructural facilities like construction of a room, specific machinery for the four CLG activities taken up and complementary services of power connection and related aspects without which the CLG activities would not be productive were arranged in the settlement village. More than being a dream comes true; it multiplied the trust the settlement had on the project, the SHG and the CLG for a productive outcome.

The good Samaritans who extended a helping hand to marshal the necessary funds – flow are listed under the following section

**Gearing Stakeholder Involvement for Marshaling Funds –flow :** The helping hands of many stakeholders and social service organizations were ensured to marshal resources to arrange the supportive input provisions for establishing the CLG. The ensuing Table presents the relevant data.

**Table : 52 Gearing Stakeholder Involvement for Marshaling Funds**

Supporters roped in	Purpose	Grant/ Monetary assistance sanctioned (Rs)	Operational support sanctioned
Forest Department (DFO)	Construction of room/shed	2,00,000 /-	Exhibit 14
MagalirThittam (Women's Project)	Establish the CLG (initial investment)	2500 /-	-
FICCI FLO (NGO)	Electrical fittings (meter etc.) for power connection	19,000 /-	-
Donors	Electronic weighing scale, sealing machine etc.	5500 /-	-
MagalirThittam (Women's Project)	Pulverizers (2)	Rs.1,00,000/-	-
Krishi Vigyan Kendra, Karamadai.	Multiple Training Sessions Packing and labeling materials	Rs.60,000/-	
Tamil Nadu Electricity Board (TNEB)	3 phase power connection	-	Supply at subsidized rate

It was heartwarming to record the fact that, irrespective of whether they had any stakes in the running of the CLG or otherwise, both Government and NGOs readily extended a helping hand to support the CLG established under a tribal SHG. The assistance was sumptuous enough, more than Rs.5,00,000/-, to engage the cog wheels moving for productive good (Exhibit 14).

**Assign Spearheading of CLG Accounts for Economic Empowerment:** As stated earlier three members of the SHG were elected following interactive discussions, to the posts of **Office bearers for the SHG** formed in the village, namely a President, Secretary and a Treasurer. Details on how a budget of Rs.1, 00,000 /- had been sanctioned from **Tamil Nadu**

**State Government Rural Development and Panchayat Raj Department** for purchase of machinery to initiate production in the CLG was informed. Subsequently the members were taken to the Bank and an Account in the name of “**Poocharam Mooligai Porutkal (Herbal) SHG**” was opened and the account book and passbook of the SHG were handed over to the Treasurer for future use. Assigning them the posts made them assume more responsibility.

The CLG were made to understand that the Mahalir Thittam Project follows the Community Driven Development (CDD) approach and has enrolled the poor and under privileged into the mainstream development process as well as made them decide, participate, implement and monitor their progress and development. An amount of Rs.1,00,000 was deposited by the State Government in the CLG Bank Account. Having funds in hand for purchase of machinery and starting production made the tribe women feel economically empowered.

**These operational aspects (Exhibit 15 and 16) vouched establishment of an enabling environment to grow and develop the CLG spawn head.**



Exhibit:14 Infrastructure Facilitated by Tamil Nadu Forest Department



**Exhibit: 15 Infrastructural Facilities for an Enabling Environment**



Meeting Former Mr.Ramesh, Project Officer, Magalir Thittam



Mr.Selvarasu, Project Officer, Mahalir Thittam Viewing NTFF



Mr.Selvarasu, at Krishi Vigyan Kendra, inspecting Training Facilities



Pulverizer Market Survey



Receiving Pulverizer Quotation



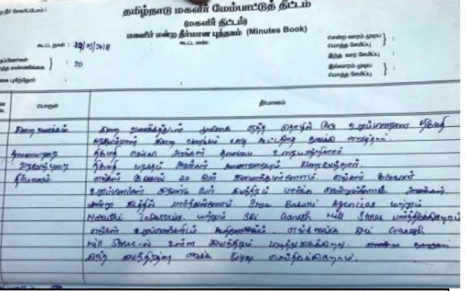
CLG Women at the Pulveriser Mill



Pulverizer Market Survey



Received Three Quotations for Pulveriser Machines



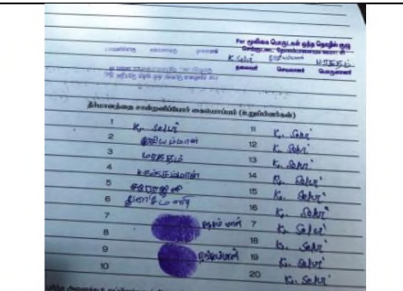
Recording of Minutes on Decision to Purchase Pulverisers



CLG Account in Indian Overseas Bank



Cheque payment for Rs.91,446/- in two instalments



Minutes signed by CLG members



CLG women inspecting machines



Hands on Demo by Technician at the Mill



Payment for two Pulveriser Machines

**Exhibit 16: Pulverizer Market Survey**

## **Sustainable Community Development Strategies**

All the efforts undertaken had been targeted on the women samples of the settlement. To buttress their empowerment further, the community in totality should get uplifted. Only then can it be called sustainable. **Sustainable community initiatives emerge pertaining to community needs.** Sustainable development is one that meets the needs of the present without compromising the ability of future generations to meet their own needs (The World Commission on Environment and Development, 1987). With this backdrop the following endeavours were put into action with active involvement from the residents of the settlement on the following broad objective:

### **Gearing Village Cohesion**

The activities conducted created the necessary ripples in the village community raising their curiosity and interest to participate in activities which entail general well – being over and above focused women’s development alone. The success of women’s movement was a real motivator. Hence it was possible to plan and execute the following activities aimed at common good too by joining hands with multiple stakeholders




- **Solar bore well project:** This project entailed the following stages of development
- Visit to Panchayat Union Office, Tholampalayam to request for Solar Powered Borewell for additional source of water
- Visit to Karamadai Union Office – request to Village Administrative Officer for Solar Bore well for water supply at Senguttaiyur
- Visit by Village Administrative Officer (VAO) , Karamadai Union Office to Senguttaiyur village to survey the area for providing a Solar Bore well
- Clearing the place chosen for solar bore well by the residents of the settlement
- Solar Bore well work was completed and additional source of water supply for the village facilitated

- The men and women belonging to the settlement participated with vigour to prepare the land for installing the solar bore well – an appreciable act of the Government promoted Namakku Naame Thittam (self-help project)
- **Tribal Day celebrations:** For two consecutive years World (International) Tribal day was observed with a host of programmes for the general well – being of the samples and the community (Exhibit 17). The first year’s programme itself was a great success in mobilizing community participation. And in the second year ensured the first the community’s full-fledged participation in all activities as the programs were organized after consulting them, and they decided what they wanted.
- **Health and Hygiene Camps:** Either as exclusive camps or as part of Tribal day celebrations, health and hygiene camps – general health, orthopaedic camp, paediatric camp, and eye camp - were organized which showcased active participation of the residents irrespective of gender or age in full swing.
- **Options for Alternate Livelihoods:** Special requests/ proposals were submitted to provide alternate livelihood options like livestock, sewing machines etc. (which were not well capitalized by the settlement) to Government offices for sanction of the same
- **Housing:** The settlement was found to live in houses constructed before 30 years. Hence group of willing residents came to the forefront to submit a written petition directly to Honble. Chief Minister of Tamil Nadu, Thiru Edapadi Palisswamy during his visit to Coimbatore City requesting to sanction Greenhouses under the Government scheme. This initiative proved fruitful, the residents have been sanctioned houses under the **Chief Minister Solar Powered Green House Scheme (CMSPGHS)**. **During the period of this report construction work was in progress for 30 houses each** of 300 square feet, at a unit cost of Rs.1.80 lakhs per house.( Rs.1.50 lakh for construction and Rs.30,000/- for Solar Powered Lights) sponsored by the State Government Rural Development and Panchayat Raj Department.
- **Desilting of Village Pond:** The researcher motivated the village residents to participate in one house one member involvement for the desilting of the village pond as part of the community development.
- **Village sanitation:** A cleaning campaign was organized by involving the NCC cadets of an Institution and an awareness generation program on raising kitchen garden was done as a joint effort.

**Women's Studies Centre**  
Avinashilingam Institute for Home Science and Higher Education for Women  
Coimbatore - 641 043  
and  
**ICAR Krishi Vigyan Kendra**  
Vivekanandapuram, Karamadai Block,  
Coimbatore - 641 113, Tamil Nadu

*Cordially invite you for the*  
**World Tribal Day Celebration 2018**  
On **21.08.2018** at **11.00 a.m.**  
in  
Senguttaiyur Village,  
Tholampalayam Panchayat, Karamadai Block,  
Coimbatore District  
Tamil Nadu



**Programme**

*Prayer*

*Inauguration of Work Area: by Chief guest* : **Mr. Deepak Srivastava**  
Chief Conservator of Forest, Coimbatore Circle

*Inauguration of Pulverizer* : **Mr. K. Selvarasu**  
Project Director, Mahalir Thittam, Coimbatore

*Welcome Address* : **Mrs. S. Thulasimani**  
Forest Council Village Head, Senguttaiyur

*Briefing about the Project* : **Mrs. M. Kamini Krishna Kumari**  
Research Scholar in Women's Studies,  
Avinashilingam Institute, Coimbatore

*Presidential Address* : **Dr. N. Vasugi**  
Dean, School of Home Science  
Avinashilingam Institute, Coimbatore

*Inaugural Address* : **Mr. Deepak Srivastava**  
Chief Conservator of Forest, Coimbatore Circle

*Special Address* : **Dr. P. Kumaravadivelu**  
Chief Scientist & Head  
ICAR Krishi Vigyan Kendra, Coimbatore

*Greetings & Felicitation* : **Dr. S. Visalakshi Rajeswari**  
Supervisor, Professor  
Dept. of Resource Management  
Avinashilingam Institute, Coimbatore

**Dr. M. Kasthuri**  
Director (i/c), Women's Studies Centre  
Avinashilingam Institute, Coimbatore

**Mrs. Jayanthi Manohar**  
President, FICCI FLO, Coimbatore


**Mrs. Nirmala Nandakumar**  
President, Inner Wheel Club, Coimbatore

*Feedback* : முலிகை சார்ந்த தொழில் மகளிர்  
கூட உதவிக் குழு உறுப்பினர்கள்

*Special Activities* : Eye Camp - Lotus Eye Hospital & Institute  
Coimbatore  
Dental Camp - Sri Ramakrishna Hospital  
Coimbatore


*Vote of Thanks* : **Mrs. R. Selvi**  
Self Help Group Leader

*National Anthem*



**Avinashilingam Institute for Home Science and Higher Education for Women**  
(Deemed to be University under Category 'A' by MHRD, Estd. u/A 3 of UGC Act 1956)  
Re-accredited with 'A' Grade by NAAC. Recognised by UGC Under Section 12 B  
Coimbatore - 641 043, Tamil Nadu, India

**World Tribal Day Celebration 2018**



<i>Date</i> <b>21.08.2018</b> Tuesday	<i>Venue</i> Senguttaiyur 'Irular' Village Coimbatore District	<i>Time</i> <b>11.00 a.m.</b>
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**Avinashilingam University**  
Institute for Home Science and Higher Education for Women  
(Estd. u/A 3 of UGC Act 1956)  
Coimbatore - 641 043, Tamil Nadu, India  
(Deemed to be University under Category 'A' by MHRD)  
Re-accredited with 'A' Grade by NAAC  
Recognised by UGC Under Section 12 B

**International Tribal Day Celebration**  
Senguttaiyur 'Irular' Village, Tholampalayam Panchayat, Karamadai,  
Coimbatore District  
**9<sup>th</sup> August 2017 Wednesday at 10.00 a.m.**

**Initiation of Marketing of  
Eco-friendly Herbal Forest Products**

by Research Scholar **M. Kamini Krishna Kumari**  
Avinashilingam Institute for Home Science and Higher Education for Women,  
Coimbatore  
and  
Awareness on marketing techniques by ICAR KVK,  
Special Activities by NCC cadets  
Welfare Projects & Opening Sales by FICCI FLO  
Health Camp by Ganga Hospital  
*You are cordially invited!*

**Agenda**  
Prayer  
Presidential Address  
**Mr. N. Palani Raja**  
Range Officer, Forest Department, Coimbatore Division, Periyanaickenpalayam Range

*Felicitations*  
Dr. P. Kumaravadivelu, Director, ICAR Krishi Vigyan Kendra, Coimbatore  
NCC Officer, Avinashilingam Institute for Home Science and  
Higher Education for Women, Coimbatore  
Dr. B. Nalini, Orthopedic Doctor, Ganga Hospital, Coimbatore  
Mrs. Uma Maheswari, Chairman, FICCI FLO, Coimbatore,  
(Ladies Organisation of Federation of Indian Chamber of Commerce)

*Vote of Thanks*  
**M. Kamini Krishna Kumari**  
Research Scholar

**Dr. S. Visalakshi Rajeswari**      **M. Kamini Krishna Kumari**  
Supervisor                                      Research Scholar

**Exhibit:17 Tribal Day Invitations**

#### **Phase IV. Empowerment Vs Well – being Endeavours Realized - a Vignette**

All the activities carried out for the general well – being of the community at large had a telling effect in that it could **change the life styles of the people from what** it was earlier. They started participating in groups (**Group cohesion**) with a common goal unlike the previous years when they used to shy away on seeing the research scholar. Definitely there has been a paradigm shift in the **attitudes, behaviour and mind set** of the people in the settlement for a **positive transformation to work in unison for a common cause**.

Envisaging an integrated strategy to address development on all lines and simultaneously presenting them on a platter of prominent programmes or schemes is always felt imperative to reach the goals of holistic empowerment. It should have a cascading effect. That should be the **philosophy** on which all **empowerment** strategies should be framed.

This part of the study discusses the endeavours realized to empower the selected sample (attained through various strategies) as a narrative with proof of evidences in materialistic forms and as changes evinced in the cohort for attitudinal/ behavioural transformations. The yardstick is to deliver the strategies that deliberate on providing both actual opportunities for participants to influence decision-making (de facto empowerment) and that which can make them feel empowered (subjective empowerment). The intervention strategies were aimed mainly with these objectives. Hence this aspect of the study is discussed under the following broad heading:

#### **F. Targets Achieved to Empower Women – Amorphous to Apparent**

It is obvious that the effects of the empowerment strategies undertaken would bring out outcomes which are amorphous or apparent. Hence the findings of this aspect of the study are discussed under the following sub - headings:

**Techno-Based Up Gradation for an Enabling Environment**

**Entrepreneurship - An Instrument to Ensure Alternate Livelihood Options**

**Enhanced Eco-Based Well -Being Status of Women**

**Input- Outcome Scenario: Evidence of Assured Well-Being**

**Outcome-Impact Analysis**

**Bottom - Up Model for Holistic Community Development**

## Techno-Based Up Gradation for an Enabling Environment

To enable the women to engage in collective action of their livelihood opportunities, the much promised environment was duly laid out for the intended uses as explained below. The amenities were provided as per schedule drafted and was made available for use of the beneficiary participants. It was very heartening to record that the amenities and services could be delivered on right time itself is a note of success. The details are presented under Table 53.

**Table 53: Time Schedule for Enabling Environment for Techno-Based Up Gradation**

Activities scheduled	Year of Implementation
Oral commitment by Project Officer, Magalir Vazhvaadara Thittam, Coimbatore for sanction of Rs.1,00,000/- for procuring equipments	Jan 2017
Tamarind deseeder machine installation at Senguttai by Krishi Vigyan Kendra	Feb 2017
Ranger visited village to discuss feasibility and area for shed construction	April 2017
Forest Department confirmed sanction of Rupees Two Lakh for construction of work place in Senguttaiyur village	June 2017
Work commenced for building of a room by Forest Department	Sep 2017
<b>Work completed for shed</b>	<b>10 Oct 2017</b>
Applied and sanctioned power supply at subsidized rate to the shed for SHG Common Livelihood Project	Nov 2017
Facilitated label and packing materials	Feb 2018
Weighing machine (30 kg) donated by philanthropists	Feb 2018
<b>Three Phase Power supply by TNEB from transformer to shed</b>	<b>Jan 2018</b>
Donation of Electrical items for power supply donated by FICCI FLO	Jan 2018
<b>Delivery of Two pulverizer machines to village</b>	<b>25 Jan 2018</b>
Test run of machines following the instructions given by Machine operator	Jan 2018
Electronic Weighing Scale (200 kg) and sealing machine donated	March 2018
Installation of Electric meter board, wiring and switch board	July 2018
Installation of two pulverizer machines	July 2018
Building of wall for four feet (4") to cover the top portion of shed	August 2018
<b>Inauguration of the shed and machines</b>	<b>09 Aug 2018</b>

From January 2017 to August 2018, there has been a profuse flow of activities which helped to create a trust in the purpose of the project. Roping in Government officials for sanction of grants/ funds for procuring equipments and construction of a work place to house the SHG and its CLG activities was materialized with due concern for the settlement women. Proper permission for eco-based intervention was sought.



### **Entrepreneurship - An Instrument to Ensure Alternate Livelihood Options**

Alsop (2005) uses the phrases „**power with**“ and „**power within**“ when talking about empowerment. In her words, if a person or group is empowered, they possess the capacity to make effective choices and to translate their choices into desired actions and outcomes. Taking cues from these the sample women were coaxed to join together and form a Self Help Group and start a Common Livelihood Group (CLG). Plate (10) As the description suggested, all the **20 women** who formed the core group were engaged earlier in selling deseeded tamarind (MFP) or were well versed in the traditional method of preparation of herbal hair wash powder from *Alibizia amara* leaves (NTFP). Hence, they cherished a common indigenous skill and a common outcome. Once they were trained in the techno – based methods of cleaning tamarind and hair wash powder making, their interest to augment production and realize good returns increased multifold. Eventually they embarked on large scale collection and processing of these products as a joint, collective endeavour. The CLG hired women and men labour from their own families for processing the mass quantity of tamarind collected from forest through the first time ever successful bid of auction trees.

Further the training imparted on grading, packing, labeling and quality control of the products enabled large scale production. With due permission from the authorities concerned they started labeling and packing them as „**Avinash**“ **herbal hair wash powder** and „**Avinash**“ **deseeded tamarind, a successful micro enterprise** Plate (11) of their own. This also enabled stretching their market reach higher. Having been introduced to popular shop owners earlier, they could sell their products for a fair price (inclusive of profit) beyond their settlement premises and obtain the goodwill of consumers at large. This also reduced their stress of dealing with middlemen and losing out on them. Not only did they succeed **in reaching the unreached markets, but were also able to prove that they could produce tradable quantities of the products**. Regular payment of consumption bills to the Tamil

Nadu Electricity Board discloses the sustained operation of the CLG activities, especially flour making for which the entire settlement depends on them.



**Plate :10 Initiative Activities of the CLG Common Livelihood Group**



**Plate: 11 Products of Micro Enterprises**

Supportive assistance rendered by Forest officials to access raw materials (MFP/NTFP) from the forest without any inhibition was an added advantage. All these findings highlight the improved empowerment and entrepreneurial spirit among the samples which portray their empowerment status enabling them to possess **self-determination** and

enjoy and benefit from the **resource access** thus made possible. **Evidently they got transformed as successful entrepreneurs. The study could boast to have contributed to the successful launch of a SHG and the CLG and enrolling a cluster of tribe women into economic mainstream. It has also vouched for mutual benefit.**

### **Enhanced Eco-Based Well -Being Status of Women**

The findings of the study proved that with active support, the women can emerge as the assets in the settlement as among them were those who cherished the traditional skill of processing NTFP, especially *Alibizia amara*, as a livelihood option. They, because of their umbilical connection to the eco system of that reserve forest area, **their abode for generations, had learnt to identify and benefit from the herbal qualities of the leaves of the tree and the knowledge has been passed on for generations which are something very unique about the women.** Commercialization of the products was done in a marginal level as they lacked appropriate tools to process them. Sheer lethargy, drudgery associated with the process, fatiguing conditions (walking long distances for collection of leaves, posture and tools adopted for processing), and lack of transportation for marketing – all had prevented them to take this livelihood activity seriously. Similarly, fear of strangers, especially forest officials and regular traders had developed an inhibition to take up tamarind auctioning (MFP) and processing only in a very limited manner. Both the products, hence was sold in **negligible quantities in the local markets** accessed by the single bus service. These were real impediments in their path to progress.

But with the implementation of motivation and intervention strategies, community empowerment network representatives could be identified who could voice their requirements. *Forming of the SHG and the CLG which chose to undertake four eco – based important livelihood options as their preference stands as solid proof for the interest they had in empowering themselves on their own efforts and the commitment they had to cherish and uphold their indigenous skill, thereby preserve their regional identity and resources (MFP and NTFP).* They have flashed that they are in a way the *custodians of the select forest resources.*

With regard to *Alibizia Amara*, they had been practicing “**wealth from waste**”, thus transferring knowledge on use of a **resource, available free of cost** and simultaneously help in, preserving the environmental cleanliness of the area. Their livelihood option, especially carried over by the women of the settlement, though has been commented as feminization of

labour, has been instrumental in **upholding an eco – based technology**. With the options given through training and material support to adopt quality control measures, packing and labeling of the products they were found to enlarge their **collective endeavour** to “productive and tradable quantity” production, **introduce micro enterprises**, which enabled them to **reach remunerative markets** beyond their reach Plate(12 ).Collective action in its wake had also reduced drudgery and fatigue associated with the activities, internal misunderstandings and helped to **earn good monetary returns** for the effort put up. They could **earn a regular living** in the real sense. They engaged in CLG level **account maintenance and banking** operations. Definitely it enhanced their **mental/ emotional satisfaction** too.



**Plate: 12 Eco –based Products in Tradable Quantities**

The samples were found to have been empowered in **voicing their requirements**, specifically where they had to bid auction for tamarind trees, learnt to sign petitions for submission, express their opinions in decision making forums where earlier men only spoke and the like. They all the more proved that they were efficient enough by hosting the **first sales of quality, packed and labeled tamarind** to members of the FICCI FLO in their own village. **Many of them had started savings** - a practice quite not much practiced earlier and they started contributing to family income. All these, they agreed to give them a lot of mental peace and satisfaction – true feelings of enjoying **appreciable well – being**.

The **connections and capabilities**, the dual „**must qualities**“ for successful entrepreneurship, was thus made visible through their earnest endeavours. **They had made their capabilities visible to the society beyond their settlement, had achieved a branding**

for their eco – based products and created a space for themselves. All these stand testimony to their empowered status of well – being status in an eco – based trade line.

### Input- Outcome Scenario: Evidence of Assured Well-Being

The ethnographic study enabled understanding the cohort and their underlying problems for empowerment of women. The objectives of the study, therefore was streamlined to analyze in depth the status of the tribe women mainly to identify the causal factors for their predicament, both because of their poor family conditions and next in terms of their gender – specific attributes. This has been the germane behind the intervention strategies focused on in the research design. Though it has already been implemented, this **input Vs outcome analysis** is done to project the angle in which the inputs were aimed and to achieve what. The following Table explains the relevance of this part of the study considering them in two different paradigms

#### – Poverty Reduction Paradigm – Evidence of Assured Well-Being

The ensuing Table explains the strategies taken up and implemented to achieve reduction in their poverty status.

Livelihood option through focused training had attempted to adhere these outcomes, the fruits of which are expected to be sustainable.

**Table : 54 Poverty Reduction Paradigm - Evidence of assured well – being**

Paradigms	Dimensions considered	Inputs given	Outcomes achieved
		Trajectories made open	Strategies implemented/ benefits accrued
Poverty reduction	Financial constraints	Increased Livelihood options	Awareness on rights of tribal over forest produce ( August 2016)
	Limited livelihood options	Access to finance and credit linking	Counseling on Life Enrichment Skills (Sep 2016)
	Restricted resource access	Prospects for saving	Developed confidence and awareness among women regarding women’s status, health, nutrition, education and empowerment (Sep 2016)
	Rural – based technology	Networking and connectivity	Talk on the Importance & Economic Value of NTFP (Feb 2017)
	Lack of support – infrastructure	Improved well – being	Talk on rights to NTFP (Feb 2017)
	Abysmal status	Improved „good practices“	Improving economic status through sale of NTFP (Feb 2017)
			Counseling on Group dynamics and Leadership skills (April 2017)
			Talk on livelihood opportunities in Senguttaiyur (May 2017)
			All training programmes
			Sanction of funds by Magalir thittam
			Infrastructure facilities
			Livelihood enhancement through SHG and CLG
			Credit linking with bank
			Improved marketing potentials and market
			Overall improvement in well – being concepts

Table (55) describes the activities chalked out to enroll samples based on gender related objectives. Plate (13) Illustrates evidences for livelihood diversification recommended and Implemented.

**Table: 55 Gender Specific Paradigm – Evidence of assured Well - being**

Paradigm	Dimensions considered	Inputs given	Outcomes achieved
		Trajectories made open	Strategies implemented/ benefits accrued
Gender oriented development	Financial constraints Limited livelihood options Restricted resource access Indigenous skill and technology Lack of support – infrastructure Abysmal status Voiceless in decision making	Alternate Livelihood options Access to finance and credit linking Capital and tools support Knowledge sharing Increase in income, savings and control of income Training on livelihood avenues Networking and connectivity Improved „good practices“ Access to social spaces	Successful entrepreneurs Adoption of viable microenterprises Livelihood diversification & security Increase in income & control over it Savings Skill up gradation on techno based lines Access to grant/ loans Free mobility Creating personal niche Freedom in decision making Wider networking Individual oriented to group oriented marketing Sustainable livelihood activities Health care Hygiene and sanitation Appreciable improvement in empowerment status Improved well – being



**Plate : 13 Livelihood diversification suggested and implemented**

The activities implemented prove that they have helped the sample women to empower selves by expanding their ability and knowledge levels and create an identity for themselves. Evidently the outcomes would have brought in visible reductions in their limitations and constraints (exposed earlier as impediments) and enhance their capabilities and connectedness. This analysis projected details on the changes expected and the corresponding changes achieved. The scrutiny of facts has proved that the inputs channelized to have had effective outputs in transforming the status of the selected women.

**The major transformation preferred was changing the women from dependent to independent mode or self-reliant mode.** Their willingness at the outset to emerge from

their cocoon (their houses), comprehend their inherent limitations, participate in capacity building activities, exercise free will to voice for their rights, try out alternate livelihood options and network for expanded connectivity are pointers to portray their transformed status – from dependent to independent or self-reliant entrepreneurs. Definitely the strategies put forth had enhanced their prospects for self-development and at the same time ensured empowerment of the samples in terms of social, economic and psychological aspects, which indirectly determined their well – being.

### **Outcome-Impact Analysis**

Provided the outcomes have been bright, the impact that they imposed which will speak of visible transformations in the individuals concerned was perused and it brought forth the following observations.

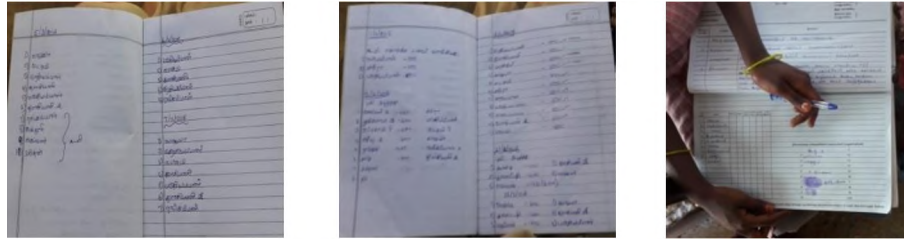
#### **Visible footprints and impressions**

- **Changes in residents, especially sample women’s lives:** The entire settlement became more receptive to the strategies and plans recommended for their welfare. Their attitudes towards life enrichment proposals were dealt with a lot of patience and self-care. Evidently the intervention had set their **value systems** on a different plane. They became more amicable, approachable, responsive and showed a different outlook on life with increased vigour to learn things new, understand their limitations, causal factors, their role and finally to welcome changes in their life style patterns.
- **Influence on participation:** The samples after a host of motivational endeavours were seen to show keen interest in participating in all intervention programmes chalked out in their favour with a newly induced enthusiasm. They had also tasted the fruits of success once the SHG and CLG were formed and the products they made reached the remunerative markets.
- **Seeking sustainability of their institutions & activities:** Capacity building on alternate livelihood options and setting up an enabling environment with all capital and tools/ machinery support which also guaranteed diversification of livelihood (processing gooseberry or Amla and flour making) promised prospects for a sustained activity in the CLG and had definitely raised their spirits and their zeal to put in more efforts.
- **Productivity enhancement:** A drastic change in the attitude of the samples was noticed with regard to their incremental productive capacity. Herbal hair wash powder making and tamarind processing which were undertaken as sheer household activity was with all sincerity and ingenuity performed to produce in bulk and sell them as packed and labeled

goods. For instance, during the training session, only **30 Kg of tamarind** was processed by them, but after bidding the auction, their productivity **exceeded 300 Kg** and they produced more than **200 Kg of Arappu powder**. Perhaps doing the activity as a collective endeavour was a reason. Nevertheless the sample evinced great interest in augmenting production once they were provided with an **enabling environment – a fully equipped workplace**.



- **Sense of achievement:** Achieving access to resources (MFP and NTFP) by exercising their legitimate rights, participation in bidding auction and succeeding in getting it, processing *Alibizia Amara* adopting techno – based methods, producing tradable quantities and selling them in remunerative markets were moments of exhilaration, the samples enjoyed as factors of achievement. **Within a time line of two years** from becoming acquainted with the investigator, they had seen wonderful changes in their approach to life and in achievement motivation. They felt it profoundly as the programmes helped to attain **a gainful expression of their indigenous skill**.
- **Incremental social interaction – widening networks:** Right from forest officials, Government department personnel, NGOs, social service providers, traders, bank officials, philanthropists, political leaders, Scheme Directors and the like, the samples got introduced to people from different walks of life which had both enhanced their cognition, knowledge level and reasoning skills.
- **Sensitized to problems:** The samples on realizing their plight were found to come out boldly, organize groups, thrash out problems and self-motivated to do „out of the box“ thinking. Eventually a few even mimicked as whistle blowers who enabled the investigator to find out their real problems and channelize actions to solve them
- **Enhanced managerial acumen:** Ample training to bid auctions, maintain accounts, market their products and keep the ball rolling in the CLG had polished their managerial abilities. Earning an income also tended to help them manage their household properly



➤ **Status of women:** Witnessing the success of the women in their entrepreneurial endeavours, their earning capacity, connectivity and resourcefulness, the men in the settlement willingly accepted women’s opinions in decision making situations both at home and in community activities. **With increase in income and control over its use, the women could see positive changes in their purchasing power, personal grooming, communication skills, a self-inflicted improvement in living status, enjoyment of amenities and happiness in doing their duties.** They found themselves equipped to coordinate action and bring in village cohesion. Evidently all these stand testimony to their enhanced status of well – being. Therefore the hypothesis (H4) set for the study is accepted.



**Plate: 14 Visible Footprints in Sustainable Empowerment of Irular Women**

## Bottom - Up Model for Holistic Community Development

Notwithstanding the great hue and cry showed in empowering women, anybody would understand that the women alone cannot become empowered as isolated entities. For them to empower holistically, the settlement and the entire population should benefit from the programmes. Keeping this in view, the following programmes were implemented focusing attention on the entire community.

- **Health, Hygiene and Personal care:** With all good intentions to improve the health and hygiene of the settlement dwellers three medical camps and an awareness generation camp (Plate 15) was organized as slated below, when children, adults and senior citizens benefitted.
  - General Medical Camp by Ganga Hospital, Coimbatore (August 2017)
  - Eye Camp by Lotus Eye Foundation, Coimbatore (August 2018)
  - Awareness on sanitation, hygiene, economic upliftment and other economic issues (Oct 2017)
  - Pediatric Camp by Indian Pediatric Association, Coimbatore (Feb 2018)



Plate 15: Health and Hygiene camps



- **Village upliftment: Housing and Amenities:** In April 2017, The Director of Adi Dravidar Department was met and special request for toilet, tailoring machines and Amma Pasumai Veedu, (Chief Minister's Solar Powered Green House Scheme) was presented such that the settlement dwellers would benefit.
- A petition duly signed by a few villagers was also submitted. The request for pasumai veevu transpired into action in the beginning of 2018 and currently work is in progress in

the village for Government sponsored construction of 30 houses (Plate 16), each of 300 sq.ft area at a cost of Rs.2.10 lakhs, (cost of house Rs.1.8 lakh and cost of solar system Rs.30,000/-), under Chief Minister’s Solar Powered Green House Scheme (CMSPGHS).



**Plate 16 : Green House Construction in Progress (CMSPGHS).**

On occupation at least **those residing in the allotted houses need not bother about open defecation** which is a very pathetic state of affairs considering the residents. This is really an achievement for the villagers, the local governance and the investigator in that it materialized only through combined effort.

		
NCC Cadets	NSS Students	Government Schemes for Women
		
Kitchen Garden	Cleaning Campaign	Awareness on Ill-Effects of Alcohol

#### **Inculcating Best Practices**

- **Group Dynamics – Namakku Naame thittam:** Visiting Karamadai Union Office and requesting the Village Administrative Officer (VAO) for sanction of permission and fund to install a Solar Bore well enabling sumptuous water supply to Senguttaiyur village, though was a herculean task was sanctioned on May 2017. Mid way the VAO visited the village to scrutinize the area for prospective installation. The men in the village were coaxed to participate, give a helping hand in leveling the ground for installing the solar bore well. The major source of water supply currently was from that source – a dream come true vision of the investigator (Plate 17).



**Plate: 17 Installation of Solar Bore well Plant under THAI Scheme**  
**(Tamil Nadu village Habitations Improvement Scheme)**

- **Prospects for alternate Livelihood:** The next venture attempted was to find viable solutions for alternate livelihood. The Tribal Welfare Tahsildar was met on and off to facilitate free distribution of livestock (cattle and goat) to Senguttaiyur women, which is under process.
- **Submission of Proposals to concerned Government Departments was given prime importance before embarking on any of the action programmes and were well documented.**(Exhibit 18 )



- **Employment opportunities:** Repeated programmes organized in the village premises facilitated employment opportunities for more than 30 men and women of the village.



**Plate:18. Dwellers employed during Desilting an Old Pond**

The auction of the forest tamarind trees facilitated employment opportunities for the men and women of the village in shedding the tamarind fruit from the trees, loading, unloading, dehusking, deseeding, weighing packing the fruit and labeling. Similarly, men and women of the village were hired for processing of hair wash powder. The labour charges for the work done were given by the CLG leader and treasurer from the proceedings of the fair-price sale of the two products.

**In future, interventions facilitated by the investigator will result in bulk marketing of the produces complementing self-sustainable livelihoods of the settlement.**

- **Inculcating Best practices:** Other initiatives like Cleaning Campaign , Kitchen garden , Awareness on Ill - effects of Alcoholism, and Government Schemes for Women were undertaken to inculcate best practices among the tribal cohort for which NCC cadets (in

August 2017) and NSS volunteers (February 2018) from the Institutions located in Coimbatore was deployed.

- **Ensuring Civic participation:** Efforts contributing to pulling the tribal population to actively participate in civic activities included meeting with local councilor, attending public meetings, signing petitions, organizing meeting with Rotary Mid Town members for their philanthropic project , diwali celebrations in the village and signature campaigns.



CLG members with Mr. P. Hariharan Coimbatore Dist. Collector at 'Adivasi Manitha Neyya Vaara Vizha'

CLG members with Mr. Pon RadhaKrishnan, Honble. Minister for Finance, and Ministry of Shipping & Transport

Researcher briefing about project to Mrs. Vanathi Srinivasan, General Secretary of Tamilnadu, BJP

Researcher celebrating Diwali with the Irular people

- **Fostering Village cohesion:** International Tribal Day celebrations: As a drive to make the settlement dwellers understand the significance of the day and how it has recognition at the global level, International Tribal days for two consecutive years – 2017 and 2018 - was organized in the village with well charted out programmes. The schedule included visits by representatives from forest department, social service people, NGOs, voluntary organizations, local governance, village head and Institutions. Several village-friendly activities were decided upon and executed. Similarly welfare programmes like health camps was also included in the agenda. The Tribal day observed in 2018 was all the more significant in the sense that the Common Livelihood Group (CLG) of the SHG, namely herbal hair wash powder making and flour mill was inaugurated that day and active production commenced after the machinery installed for the purpose was officially commissioned. In addition an eye camp was also organized. Both the years the participation of the villagers was appreciable and the cooperation extended was quite a sustained one. (Plate 18).



**Exhibit 19: International Tribal Day celebration - August 2017**



Exhibit 20: International Tribal Day celebration - August 2018



Plate. 19 The Hindu News Paper - Creating visibility

These aspects are proof enough to vouchsafe that the women in the tribal area of Senguttaiyur along with the villagers were empowered by the intervention programme organized in relation to the study and has ample evidence to certify that adequate facilities have been ensured for the settlement's sustained eco-based well-being. All the activities were implemented only after obtaining permission through proper channels .Hence all were documented well (Plate 19).

## **Phase V. Status of Women Empowerment: Post Intervention**

The responses received for the sample's status on the five indicators discussed in the Tayde and Chole Scale (2007) to comprehend their level of empowerment as personal feelings, perceptions and experiences after implementing the planned intervention strategies to improve their status was found. The findings are discussed under the following headings:

**G. Scores Attributed for the Empowerment Indicators in the Scale:** Being a post intervention study apart from analysis of the responses obtained comparative analysis of the sample's position before and after intervention had to be done. Hence this part of the findings analysed the data obtained under the following sub headings:

### **Status of Empowerment – Post Intervention**

#### **Analysis of Empowerment Status (Pre and Post intervention)**

#### **Changes Evinced in Empowerment Stature (Post intervention)**

### **Status of Empowerment – Post Intervention**

Responses given by samples on empowerment indicators after intervention is presented under Table 56.

**Table: 56. Scores Recorded for Empowerment Indicators – Post Intervention**

<b>Factors of empowerment</b>	<b>Mean Scores obtained (post intervention)</b>		
	<b>Low</b>	<b>Medium</b>	<b>High</b>
<b>Psychological</b>	20.1	30.6	<b>49.4</b>
<b>Cultural</b>	14.4	29.2	<b>56.5</b>
<b>Economic</b>	25.4	36.5	38.0
<b>Social</b>	16.0	27.2	<b>56.8</b>
<b>Political</b>	<b>50.7</b>	26.7	22.6

After Intervention it was found that the sample's perception on social indicators to be higher followed by cultural and psychological in an order. They were still dubious about Economic indicators. This necessitated comparing the scores awarded earlier to this data.

**Analysis of Empowerment Status (Pre and Post intervention):** This aspect of the study is analyzed under the following headings:

#### **Assessment of Empowerment Status (Pre and Post intervention)**

#### **Correlation Analysis on Pre and Post intervention Scores**

**Assessment of Empowerment Status (Pre and Post intervention):** The following Table gives details on the same.

**Table: 57 Assessment of Empowerment Status (Pre and Post intervention)**

Factors of empowerment	Mean Scores obtained (pre intervention)			Mean Scores obtained (post intervention)		
	Low	Medium	High	Low	Medium	High
<b>Psychological</b>	33.6	26.2	<b>40.1</b>	20.1	30.6	<b>49.4</b>
<b>Cultural</b>	27.3	27.5	<b>45.1</b>	14.4	29.2	<b>56.5</b>
<b>Economic</b>	<b>53.5</b>	31.0	15.5	25.4	36.5	38.0
<b>Social</b>	<b>39.2</b>	31.7	29.1	16.0	27.2	<b>56.8</b>
<b>Political</b>	<b>71.1</b>	22.2	6.7	50.7	26.7	22.6

The samples showed visible change in their perception on social indicators. Otherwise they didn't seem to show much of a difference in their perception of such variables. These facts highlight that the samples still showed reluctance to improve their status by an initial understanding of the factors which can improve their status. Probably the sustainable livelihood options created through SHG run CLG may in the long run change their status for the better. Nevertheless, the extent of change effected had to be found out, the details of which are explained below.

#### **Correlation Analysis on Pre and Post Intervention Scores**

To determine the degree of change affected more scientifically, statistical analysis using paired „t“ test was done fitting the mean scores for pre-intervention and post intervention for all the five indicators. The findings revealed that the samples had improved in their empowerment awareness status on all pointers and the values were significant at 1% level. This exercise also proved that the samples had improved well in their empowerment status after the intervention programme.

**Changes Evinced in Empowerment Stature Post-intervention:** Fitting the responses of the samples to empowerment categories on the Tayde and Chole (2007) Scale, brought forth the following findings which are discussed under the following headings:

#### **Distribution of the Samples in the Empowerment Categories**

#### **Distribution of the Samples on Empowerment Indices**

Tables (58) and (59) explain the position of the samples in the various empowerment categories and empowerment indices before and after intervention respectively.

**Table: 58 Distribution of Samples in the Empowerment Categories and empowerment indices**

Empowerment categories*	Percent Responding	
	Pre Intervention	Post Intervention
Very Low	30	0
Low	24	6
Medium	33	30
High	11	41
Very High	2	24

\*(According to Tadye and Chole Scale (2007))

**Table:59. Comparitive Empowerment index**

Empowerment Categories	Empowerment Status			
	Pre Intervention		Post Intervention	
	Index	Rank	Index	Rank
Psychological	69	II	76	III
Cultural	73	I	81	I
Social	54	IV	71	IV
Economic	63	III	80	II
Political	45	V	57	V

Calculation for the five indicators or overall empowerment status revealed the proportion of response after intervention at **very low levels to be nil and low to be six per cent**. A hike in 30 per cent over and above those who had responded as high was reported, while for very high the pre and the post intervention scores increased by ten per cent. It was very clear that their empowerment status had shot up appreciably after the intervention programme.

Comparison of the empowerment index between pre and post revealed that their status of empowerment had not changed between the time interval, but rank wise they still ranked high in the cultural (I) empowerment indicators and the least (V) in their social and political indicator awareness. Another feature was that awareness of economic indicators had increased appreciably and had been raised to Rank II pushing psychological empowerment to the III level.

**These are proof to show that their knowledge level on all the five types of indicators of empowerment had improved well. Hence the hypothesis set for the study is accepted.**

To defend the case on statistical terms the pre and post intervention scores were correlated for possible associations. Correlation analysis on empowerment status of the samples verses select independent variables was done. The findings proved negative correlation for age @ 5% level and positive correlation with education @1% level for pre intervention index. But the same for the post intervention index showed positive correlation with education alone at 1 %level. It is very obvious that education of the samples played a major role in the comprehension of the empowerment indicators. Previous studies on well – being have proved that well-being can be achieved only if the components of income, health, livelihood etc. are satisfied. They do have a direct bearing on the environment. Hence the scores were further analyzed for univariant linear regression analysis. The coefficient of determination ( $R^2$ ) showed 69.4% variation in empowerment. Age was not a significant model, whereas co-factors of education or literacy level and family income were found to be influential factors.

All the findings time and again reiterate that the samples have improved in their empowerment status post intervention. Sheer reluctance to meet people, laziness to do, engage in income earning tasks, complacency and fragile networking – all had been responsible for their low level of empowerment. Evidently all these to happen their educational level and income earning capacity has to be improved. There is always a silver line .With ample well – being strategies now implemented they can be brought to the forefront and will benefit from the nature’s gifts they are rightfully entitled to. Only if their wellbeing components of literacy level and family income get improved can there be further improvement.