PEOPLE, FOOD AND BIORESOURCE DIVERSITY

WORKSHOP PROCEEDINGS.

**SAKTI-RAMPACHODAVARAM**

**(ANDHRA PRADESH)**

**Conducted by**

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| 1. | SAKTI - The organisation SAKTI has been serving the cause of tribals by filing public interest litigations, by the spread of awareness among the people and by mobilising to protest against exploitation and thus get justice due to them.  SAKTI’s activities are diverse, covering the wide socio-economic and political spectrum. It has been actively involved in protecting the forests from reckless and illegal felling. Along side, it has engaged itself in the afforestation activities. It has been successful in fighting for the closure of unlicensed liquor ships. The local youths and others are mobilised to end the socio-economic and political exploitations of tribals by vested-interest groups.  SAKTI was active against leaders who used to harass the rape victims through arbitrary decisions at local level by imposing heavy penalty and denying the victims of rape, deserted wife and children from the compensation. Such victimisation has since been controlled due to SAKTI’s relentless efforts in the region. Further, a number of victims are helped to get the maintenance fee after prolonged ordeal in the judicial forums.  SAKTI organised a padayatra in the East Godavari District to protest against the alarming rate of deforestation which has led to extensive land slides, severe floods (in rainy season) and resulted in the drying of rivulets in summer. These caused extensive damage to life and property of the tribals inhabiting the region.  SAKTI has been fighting against the Godavari Plywood factory which indulged in large scale felling of mango trees in the East Godavari district reserve forests. The factory was able to buy wood at a throw away price while the market rate was quite high. Despite local people’s protests, the factory was unmoved. SAKTI not only used the political and judicial forums but even mobilised people’s support in ending such day-light exploitation.  SAKTI could educate people against the exploitation of their land resources by Indian Tobacco Company. The Company was able to make people go-in for tobacco cultivation and lease out the land. The company offered very nominal price to the growers. The land got degraded in the process. Now, the growers are able to get remunerative market price for their produce as the Girijana Cooperative Corporation was convinced to provide loans and other support services and keep check land alienation through this cash crop. These could be achieved only because of the relentless efforts of SAKTI.  SAKTI has been active to end exploitation of wage labourers. The fighting is still going on to make private mining contractors, private timber agents and others to pay minimum wages to the workers. SAKTI is confident of realising this goal sooner or later.  SAKTI has devised a novel way to check cheating in weighment by providing public balances in the weekly markets. The tribals first get their produce weighed in Dharma Kata (public balances) and then go to merchants to sell. Also, SAKTI has been successful in ending false levy of ‘market tax’ by the panchayats, as such this practice was illegal.  SAKTI has devised several methods to protest against corrupt officials, absenting teachers from schools, illegal sale of liquor etc. with the active support of the tribals. These have paid rich dividends already while we intend to continue our fight in this direction further. The Tribal Co-operative Societies have not provided proper representation to tribal people on their Boards. SAKTI has been fighting against this injustice and to secure them their rightful representation. It has been fighting against the fraudulent land settlements and benami transactions which have resulted in the tribals losing their land. SAKTI has been successful in screening the land records and thus restored land right to tribals.  SAKTI has unsparingly been engaged in educating the tribals about their rights, the exploitation to which they are subjected to, and mobilising public opinion in ending socio-economic and political abuse of tribals in the district.  SAKTI is mustering enough strength (SAKTI) to courageously brave the rough weather in realising its cherished goal. Though the road is quite thorny and abound by obstacles, SAKTI is working unsparingly and thereby contributing its mite in the service of the tribals. |
| 2.  Tribes in the Agency of East Godavari and their status | *Historical Background of The East Godavari Agency Area:* Next to the coastal plains to the west, except for a wide stretch of about 100 miles between the Godavari and Krishna, a series of hills are met with both of the north of river Godavari as also South of Krishna. These are referred to as ‘Eastern Ghats’. Unlike the Western Ghats of India, these hills do not form a continuous running from the northern edge to the southern edge. Eastern Ghats or Eastern hills in different section in which some definite group of hills are discernible in the northern section cover the area from the borders of Orissa to river Godavari. The hill ranges run from north east to south west and reach an elevation of 2,000 to 4,000 feet above mean sea level. Between these two rivers for over 100 miles the ghats almost completely disappear. In the south of Krishna again a section of eastern hills cover the Nallamalai, Erramalai, Seshachalam, Pala Konda ranges. This southern region forms a very interesting geomorphological formation.  Eastern Ghats are rich in flora and fauna besides being home for indigenous tribes. Konda Reddy, Goudus, Konda dora, Kammara, Koya are the major tribes of the area. Every tribe is divided into a number of sub groups on the basis of occupation and dietary habits. Most of the tribes’ mother tongue is Telugu which differs from the dialect of the general Telugu.  All the tribes are largely dependent on the forests for their sustenance relying on the natural fruit trees of the area [jack, mango, roots, tubers, wild game(hunting) etc.] During the summer, the tribals survive mainly on the jack and mango fruits. The seeds and kernels of these fruits are stored from the forests and pumpkin, millets, supplemented by the meat of wild boars and birds trapped around the podu fields.  Their staple food is mainly millets such as pannicum, ragi, jowar, bajra, pulses like redgram, beans etc... The main source of their cash incomes for purchasing necessities such as salt, oil, clothes etc. from the weekly markets is the collection of minor forest produce. The jeelugu (Caryota urens) in the uplands and Toddy (Borassus flabellifer) in the lowlands is a vital source of sustenance for the tribals during summer. It is also the central theme of ceremonial drinking of toddy soon after day breaks and again before sunset. On such occasions, all members of the community gather together at their allotted trees and everyone from the youngest to the oldest member, irrespective of sex, is offered the gourd in turn. |
| 3.  Forest : A Tribal Perspective | *Tribals of Eastern Ghats* Kondareddi Shifting cultivators  Koyadora Cultivators preferring lowland areas  Kondakammara Blacksmiths  Kondakapu Settled as well as shifting cultivators.  Valmiki Mostly literate, employed as village servants  and also practising petty trades.  These tribes, numbering in all about 2,00,000, are spread over 700 villages in the Agency area.  Bison horns are the cultural symbols of the Central Tribal Belt. The Bison is taboo for some tribes including the Kondareddis.  Two months, May and June are named after mango fruits. May is Dulavidi (Telugu) because the falling of the mango fruit in this month sounds like the Dula Dula. By the end of June, i.e. Peddavidi (Telugu), even the name of the mango fruit is no more heard. In early mornings it is a common scene that the tribal and wild bears play hide and seek to collect the fruits fallen around the trees.  On the banks of the River Godavari, the mango festival is celebrated by tribals to begin the consumption of mango fruits. The first eating of mango on New Year’s Day is a common custom all over Andhra Pradesh. In Rampa country tribals will not pick the flowers of Rell (Cassia fistula) before celebrating Gangalamma festival. Most of the places are named after the variety of mango fruits available there, Gurrammidi means mango where bisons roam. Gujjammidi means fleshly mangoes.  The drongo is referred to as the kotwal or policeman in folklore. The wild Sambar preceded by a drongo is king. Such a sambar is considered as a representative of forest kings and should not be killed. The vegetation carried by the rutting sambars is supposed to be the nesting site of drongos and the sambar is believed to carry the diadem of Katamaraju (the celestial king of the forest, after whom is named the highest peak of Rampa country, Katamaraju Konda).  Expectant mothers are barred from consuming the flesh of animals caught in nets as the child is likely to have threat to his life (Urisankatam). Expectant mothers are barred from consuming the flesh of spotted animals as their children may get the spots on the body.  The yellow throated hill sparrow migrated to the Eastern Ghats in August due to which the month is named after the sparrow, *kanne*. The arrival of these birds herald the sowing of pulses. Erythrina which flowers in February and the birds flock around the flowers for nectar and the month is named after the tree, called Badadam. The Dummukonda hill is the source of a number of hill streams and is called Dharala Dummukonda. Another hill also called Dummukonda is considered to be the abode of the forest kings, where the hunters are expected to speak in a different language and is called Basa Dummukonda (Bhasha, which means language) to prevent the forest kings from discerning the true purpose of the hunters.  Basa Dummukonda is also renowned for the abundance of herbs occurring there. Aidala Cheruvu is a pond near Katamraju Konda named after the Aidala Raju deity considered to preside over the area. These are the revered pilgrim centres of the tribals.  Sila is the tribal word for crab and Sileru is river on which Five hydro electric power projects have been built. The crab, the fish, the frog, the tortoise are considered to be the manifestations of water deities. Any hill named after a frog, Kappa Konda, is certain to have a water source or pond.  Whether it is plucking of a fruit, picking a herb, hunting game, tapping toddy, or clearing forests for cultivation - the tribals feel that they must honour the interconnections and the relationships between the celestial beings and pray to them with prescribed offerings to invoke their blessings.  The palm civet which is fond of jeelugu (toddy from the Caryota urens tree) and the tree and the animal are looked upon as friends. The person who kills a civet should not tap toddy. In case he does so the tree may stop yielding toddy.  The kings of the forests, the shepherds of the wildlife, the virgins of the water -so goes the portfolios of the celestial being governing nature.  One has to observe a number of such customs and taboos which are based on traditions which ensure the conservation and of nature and its constituents.  The tribals classify these forests as:  1. The thorny ones where tigers cannot walk.  2. The moderate one where the ants are not abundant (due to lack of fruit bearing trees).  3. The low grass areas on the top of the hills where arboreal hawks cannot reach.  4. The canopy forests where the kites cannot descend.  5. The cane brakes where the snakes cannot enter.  The names of the surroundings, their morphological features, the seasonal calendar, the variety of hunting methods and technology, the folklore lend a human touch to the awesome Natural Environment in which the tribals live.  The Neredu or Jamun tree (Eugenia Jambolana) is considered to be auspicious and its pole should be planted first in constructing a new house. The bride and the bridegroom are to be seated on Nereduballa jamun seat (peeta). Sprinkling of water with jamun leaves to considered to purify the environment and to ward off evil.  “... There is a patch of pure teak of 8 acres outside the Vemula Konda block. The teak here is 60 feet high with average girth of 3 feet. The villagers believe that this plantation was raised by the Devetha (Goddess Bapanamma) owing to the absence of appreciably large teak areas anywhere else in the whole of Rampa. It is also believed that 30 years ago when one of the trees was felled, it exuded blood and the coolies who felled the tree died a few days thereafter.  The stem of the tree which is 3 feet above the ground measured 10 feet 5 inches in girth...” (Note on Rampa Forests By Mr. Seshagiri Rao, Extra Assistant Conservator of Forests, Dated 5.10.1925).  The tribal chiefs (known as Muttadaras) of this area used to receive gifts in return for the timber collected from these forests by the non-tribal timber traders.  “The location of Rampa close to the River Godavari, the cheap hill labour and the absence of restrictions regarding felling attracted the merchants from the low country whose conception of these forests was that of a pump set for the benefit of those who work the handle.” Forest Working Plan, East Godavari, 1990.  The British Govt. Paid a one time compensation of Rs. 3,630 at the turn of the century to these Muttadaras and proceeded to reserve these forests under the Madras Forest Act of 1890. This process was first begun by reserving the border forests of Eleswaram and Gokavaram.  This is halted due to the stiff resistance put up by the tribals to such reservation which led to the issuance of repeated warnings by the Government not to allow any forester below the rank of an Assistant Conservator to enter into Rampa country without the written permission of the District Collector. The situation grew serious enough to lead to the framing of the Rampa Country Forest and Transit Rules in 1894.  Thus the process of Reservation of these areas remained incomplete till well after independence. In fact with the process halted near the border at Additeegala in 1941, the process was resumed only after Independence and Rampa forests were reserved only in the year 1967.  The Konda (or Hill) Reddies of Andhra Pradesh (AP) are one of the tribal groups which depend to a great extent on slash and burn cultivation. They inhabit the wooded hills flanking the Godavari River where it breaks through the barrier of the Eastern Ghats.  Traditionally the economy of the Reddis is based on the periodic felling of forest and the cultivation of various millets, maize, pulses and vegetables. This type of tillage in which the axe and not the plough is the primary instrument is in AP known as Podu, in Madhya Pradesh as bewar or Penda and in the North east as zhum. |
| ***4.***  Agriculture and Land Tenure | Presentation by Participants According to the well known anthropologist Haimendorff the agriculture practiced by the tribes represents a crude form of cultivation found anywhere on the Asiatic mainland. The fact remains that the tribes do not subsist on their agriculture alone but also on wild forest produce eating the sago like pith of the caryota palm or the Kernels of mango stones. They also hunt with bow and arrow.  Traditionally ownership of the land was vested in local groups whose members may hunt, collect and cultivate anywhere within the territory belonging to the community. The sense of unity based on a group’s common ownership of a tract of land finds expression in joint ritual activities. The members of a group do not live in one locality but they get together for the celebration of seasonal festival and for the performance of sacrificial rites connected with the agricultural cycle.  While the atmosphere within a group is entirely egalitarian one man acts as heads of the community. Heimendorff in his study of the “Tribes of India” recalls the function of the head man on the religious sphere acting as mediator between man and local deities. The head man inaugurates the sowing of the grain crops and propitiates the earth mother. This Goddess is the only deity regarded with gratitude and affection. The improvement of communications in recent years has made their habitat accessible to outsiders and the commercial exploitation has brought about a change in their style of living, thereby eroding into their independence.  Tribals believe ‘Nature’ itself is their God. This faith in God has turned into fear. For example to cut trees, they fear as they believe their respective God exists in every part of nature. These innocent tribals fear many kinds of poisons which are in plants, insects, snakes and even in wild fruits. This fear is the basis of their reverence for nature.  Villagers nearby city or town and having transportation facility had a major influence on these tribals. But, the small hamlets inside the forest are still rich in tribal culture and less depended on markets. The interior tribal villages are very simple. The small hut built by mud and the roof covered with palm leaves, fulfil the concept of their home.  Dried gourds and wooden utensils and other local materials are used in the kitchen, hunting and other activities. Non-edible bottle gourds collected from the forest are used to carry water, to store grains, to make liquor and even for storing herbal medicine. The tribal life and their activity show the real picture of ‘Sustainabilities’.  Tribals identify the months on the basis of activity and rain. Every local month is referred as a particular activity, which has vernacular names. Table 1 shows the local calender of the tribal people in East Godavari region which starts from Ugadi and ends at Shivarathri. ‘Ugadi’ is the new year day for the tribals. From that day all activities of the year will be decided. |

**Table 1**

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| **English Month** | **Local month** | **Main Activity** |
| March , April | Kotha Amavasya | Ugadi - New year day |
| May | Gandha Amavasya | Gangalamma festival |
| June | Rohini | Hot month-Even breaks pounding rod |
| July | Murugasire | Rainy Season |
| August | Kanne | Migration period of hill sparrow |
| September | Korra Koththa | Foxtail millet harvesting |
| October | Budama Koththa | Dryland Paddy harvesting |
| November | Savathi Palakam | Threshing season (All crops) |
| December | Jonna Koththa | Jowar harvesting |
| January | Sankranthi | Collection of new grains |
| February | Pappu Koththa | Pulses harvesting |

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|  | The cultivation of kondapodu involves clearing the forest on a patch of land, allowing the felled trees to dry for three or four months, and then burn them. The seeds are dribbled on the ashes and dug into the land with sticks. After cultivating the land for 2 or 3 years cultivation is shifted to a new plot.  The tribals grow Sorghum, Millets, Kidney beans, Pigeon peas and other pulses as food crops and sesamum and castor as cash crops which they sell.  It is stated that Reddies raise Sorghum millet by two methods. In the first they prepare the soil by ploughing it three or four times and then broadcast the seeds.  In the second method, a smaller area is ploughed 6 to 8 times and a well prepared patch is used as nursery. When the seedlings are 4 to 5 inches high they are transplanted into the field in rows. Between the rows a space of about nine inches is allowed. Only a small amount of sorghum is raised by this method.  Agriculture not being a main activity the tribals are involved in several other income generating activities.  Earlier, tribals were practicing shifting cultivation and were growing pulses, Cereals and Oilseeds. They were not depending on market for anything. The shifting cultivation is known as ‘Konda Podu’. The shifting cultivation is one of the ancient methods of cultivation practiced all over the world, especially in the areas of forest and mountain tracts. Generally, tribals select such area where there is good growth of trees and bushes. After the selection of such land, the tribals start clearing the bushes with sickle called ‘Chinnakaththi’ on an auspicious day in consultation with ‘Mhurthagadu’ local priest. All the family members participate in this ritual. They cut off trees and under growth with the onset of summer.  When all the bushes that have been cleared get dried by the end of April, the tribal burns them and spreads the ashes over the fields. A tribal ordinarily clears 1/2 to 1 hectare for shifting cultivation. During the first year of Podu cultivation, the other villagers help him for clearing the land on reciprocal basis. When monsoon sets in, the tribal starts broadcasting the seeds with the help of ‘V’ shaped instrument with long handle called locally as ‘Konkeborige’.  Tribals grow generally mixed crops depending on fertility, duration, domestic requirements etc., He regulates the cultivation in such a way that he gets food crops at specific intervals. The mixed crops consist of varieties of 3 or 4 or even six months duration and these crops give food security to the tribal cultivator during lean periods. Generally 12 varieties are used for mixed cropping. Table 2 gives the list of varieties used for mixed Konda Podu cultivation.  Generally, tribals do not use either fertilizer or pesticide in podu fields. Harvesting starts in the month of October and continues till December. After threshing operations are over the food grains are collected and stored in baskets for future consumption. The same land is used next three phases for Podu cultivation. Generally, at the end of the third year harvesting, tribals leave the place and allow it for regeneration and look for new place for subsequent cultivation. Now-a-days, tribals stick to the same land instead of shifting cultivation. |

### Table 2

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| **Sl.No.** | **Telugu Name** | **Common Name** |
| 1 | Jonnalu | Jowar |
| 2 | Pedda Gante | Dryland Pearl millet |
| 3 | Bonthalu | Barnyard millet |
| 4 | Koralu | Foxtail millet |
| 5 | Nuvvalu | Niger |
| 6 | Kandalu | Redgram |
| 7 | Alasandha | Cowpea |
| 8 | Damalu | Field bean |
| 9 | Chodi | Finger millet |
| 10 | Buda mallu | Dryland Paddy |
| 11 | Nokka Dola | Musk melon |
| 12 | Gummadi | Pumpkin |

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| --- | --- |
|  | Due to deforestation and external influence from modern society, tribals’ way of agriculture underwent many changes. Instead of hard work in shifting cultivation, they began to do settled cultivation sowing crops like cotton, tobacco, wetland paddy and various other commercial crops.  The Koyas, Konda Reddies, Nayaks, Manne Doras of East Godavari and West Godavari cultivate jowar, maize, chidi paddy, redgram, black gram, green gram etc., They are also growing commercial crops like orange, mango, cashew, chillies, tobacco etc., All these crops, except however the wetland paddy, are grown in dry lands only. The irrigated area in tribal region is less as compared to plains. In the entire state of Andhra Pradesh, 23.97% of the cultivated area is irrigated but in the tribal area it is only 10.32% inspite of good rainfall and perennial water sources. |
| Food Security of the Tribals Wild Fruits Pitta Mallika  Chilaka Dadduga Oandlu  Boosi Pandlu  Kukku Bodda pandlu  Athipandlu  Pollu bodda  Neradu : Seema Neradu  Pedda Neradu  Tada Settu  Vaka Pandlu  Konda Mamidi: Wild Mango, Jack  Panasa  Mallika  Nakkiri Pandlu  Balasu Pandlu  Pichchuka Pandlu  Gulugu Pandlu  Garaga madi Pandlu  Konda Etha  Uduga Pandlu  Alli Pandlu Vekkudu Pandlu | The tribal communities are totally dependant upon flora and fauna of nature. They don't have any definite practices to store or collect food for the nature. There is a saying ‘Pitta Kottu’ Peyyalo Pettu’ which means when you are hungry, kill the bird and keep it in the fire.  Tribals concept of food is simple. Food security does not depend only on food crops, but it can be fulfilled through fishing, hunting, collection of wild fruits, mushrooms, tubers and roots. All the tribal groups living in the forest areas collect roots, tubers, wild fruits etc. for their domestic consumption as well as for sale. They also collect minor forest produce, process and sell to Girijana Cooperative Society or other private merchants.  The dependence of food gatherers on forest and other natural resource is more than other groups who domesticate animals or plants. The tribals in general are fond of fish and they go for fishing even to distant places in canals, ponds, tanks, etc...  Every tribal family has its own homestead garden in their back yard. They sow vegetable seeds and creeper varieties in the month of June. Maize, Cacara kaye, pumpkin, ridge gourd are the popular crops in gardening.  There are many tribal songs showing the character and importance of foodcrops, for example one song goes like this:  *Chollu nallana, cholllu pinde Tellanna*  *Allu Errana, Allu Pindi Tellana*  *Le Le Dharmaraja Le Le...*  Ragi is black, Ragi flour is white  Arka is brown, Arka Flour is white  Get up Dharmaraja get up  Here Dharmaraja represents the ‘life’. When tribals start clearing the forest for Podu cultivation, they sing the above song.  **Diversity in Agriculture**  Eastern Ghats are rich in flora and fauna diversity. There were a number of varieties of millets, pulses and Cereal Crops. Slowly this diversity is disappearing from fields. For example, 30 years back there were more than 19 varieties of paddy, but today there are hardly five varieties. Konda Podu shifting cultivation offers the diversity in the field, but is disappearing gradually and the biodiversity is also eroded along with it. Another major reason for Genetic erosion is the introduction of commercial crops like tobacco, cotton and fruit trees, as monoculture and wiping out the diversity. |
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**Mushroom Varieties**

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| --- | --- |
| Pottu Kokkulu | Termite hill mushroom |
| Giri Putta | Peddaputte |
| Nela Kokkula | Land Mushroom |
| Manu Kokka | Emerging on Bamboo bush |
| Boodepu Kokkalu | Button type mushroom, emerges from earth |
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| **Dry Meat** |  |
| Uppudu Mukka | Dry & Store |
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| **Vegetable** | Nalla Gummikaye, Anonda, Akakara, Kooragi Chettu, Kora |

Table 3 shows the Genetic erosion along with the pathway of time. Following description gives an idea about the diversity in the East Godavari region.

**Table 3**

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| **30 years & Before** | **20 years** | **At Present** |
| **Paddy** |  |  |
| Local Varieties | Local Varieties |  |
| Bangaru Theegu | Budamalu |  |
| Budumulu | Erra budama |  |
| Jella Beduma | Kodi budama |  |
| Erra Buduma | Rama bana |  |
| Kodi buduma | Bangaru Theegi |  |
| Pedda buduma |  |  |
| Jella Akkulla |  |  |
| Korava vakkalu |  |  |
| Babbulu Gante |  |  |
| Rasangi | HYVs | HYVs |
| Ganneru Vadlu | Esalu | Esalu |
| Mola Kulakilu | Masuri | Tella Hamsa |
| Panasadelu | Krushna Katige | IR 64 |
| Nallakasari | Tella Hamsa | Mysore Chythanya |
| Sanna Poram | Jaya | Jella Masuri |
| Ramabanalu |  |  |
| Bontha Kichadi |  | Swarna Masuri |
| Mypala |  |  |
| Toke Dhanyam |  |  |
| **Jowar** |  |  |
|  | Tella Jonna | Tella Jonna |
| Pachcha Jonnalu | Gujja Jonna | Pachcha Jonnalu |
| Tella Jonna | Pachcha Jonnalu | Gujja Jonna |
| Gujja Jonna | Godavari Pachcha |  |
| Godavari Pachcha |  |  |
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| **Name** | **Description** | **Yield** |
| Yerabudama  (Dry land Paddy) | Used in Shifting cultivation. Three  months duration, No external input.  Mixed crop. The rice is used as gruel. | 4 to 5 bags/acre |
|  |  |  |
| Thellu Budama  (White) | Shifting cultivation. Dry Crop. Weeding  is necessary. No external inputs. Tall  variety. Even if it lodges, it will not shatter.  It is grown in interior places. | 5to 6 bags/acre |
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| Kodi budama  (Short variety) | 1 inch height. | 8 to 6 bags/acre |
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| Bangaru Thigga | Broadcast as dry. Transplant  (Low land rice) in low land. Kandalu  as intercrop 3 kgs of Paddy mixed  with handful of Kandalu and sown. | --- |
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| Babuluganti (Rice) | Wet land cultivation. After transplantation  3 months 15 days. Does not need intensive  irrigation. Paddy is in red colour and rice  white colour. It is pound 3 times. | --- |
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| Mypala danyam | Grown in wet land. 3 months 15 days after  transplantation. No external inputs. In case  of leaf rust - Plant Jeerga - Cariota. | 7 bags/acre |
| Kodo Millet | In each earhead there will be nearly 20  fingers, the grain is brown, but, the rice  is white coloured. The upper parts of the  hand roller (Beesuva Kallu) is placed on  the earth and is rotated and that is how the  rice is processed. | 5 to 6 bags/acre |
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| Ragi-chodi | It is grown in wet land as a transplanted  variety. Duration of the crop is 100 days.  It is used for Roti and Ambali. | --- |
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| Boodu Chodi | Wet land variety. Duration 100 days the  variety is used for preparation of Pitta  Roti, Maize and tender leaves of Pumpkin  mixed ambali. | --- |
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| Bajra-Gantalu | Used in shifting cultivation. Pedda Ganta  earhead is big in size. This variety is mixed  with Jowar, Barnyard millet, Foxtail millet,  Niger, Redgram, Cowpea and is broadcasted  in Kondapodu. Musk melon, Pumpkin and  ridge gourd are also planted in the same field. | --- |
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| Potta Ganti | Wet land variety. The seedlings are raised  in the nursery and the transplanted to the  main field. 3 months duration crop. | --- |
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| Jowar - Jonnalu  Thella Jonnalu | The grain colour is white. This is used for  rice, rotti and for Ambali. | --- |
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| Pachcha Jonnalu | Used in shifting cultivation. The earhead  is compact. | --- |
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| Gujjari Jonnalu | The variety can be grown in both shifting  cultivation and wet land. | --- |
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| Little millet-Samalu |  |  |
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| Mandi sama | 3 months variety. Pounded grains are  used as rice | 3 bags /acre |
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| Pedda Sama | Wet land variety. 4 months duration.  Good in grain and fodder quantity. | 4 to 5 bags are acre |
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| Nella Sama | Wet land variety. | 4 to 5 bags/acre |
| My Sanna | 2 crops can be taken in a year. After  harvesting the first crop, the land is  ploughed back and the next crop will  be sown. | --- |
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| **Field Bean-Pappula** |  |  |
| Billa Tande | The variety is used as row crop in  groundnut. Dal of this crop will be very  tasty and is essential in the diet. | --- |
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| Siri Tande | Used in mixed crop in groundnut | It yields more than all |
| **Green gram-Pesaru** |  |  |
| Meda Pasalu | The variety is broadcasted with Pachcha  jonnalu. | --- |
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| Teega Pasalu | This variety is grown in low land. The size  of the grain is big and green in colour. | --- |
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| Cowpea - Bebbarlu | Can be grown in 2 seasons a year. | --- |
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| Police Bebbarlu | Erect variety. Used as dal. | --- |
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| Chinna Bebbarlu | Wet land variety. 3 months crop. Used as  dal. | --- |
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| **Horse gram Huluvalu** |  |  |
| Nalla Huluvalu | The grain colour is black. The seeds are  used in local health practices, especially  for mad dog bite. | --- |
|  |  |  |
| Pedda Huluvalu | Wet land Paddy. After harvesting Bajra,  this crop is grown as second crop. Fried  seeds are used as food. | --- |

**5. Threats to Biodiversity and Forest Resources**

(Case study excerpted from “Political Economy of State Property and the Commons: Forests of the Rampa Country of South India.” D. Narasimha Reddy, University of Hyderabad)

The very name Rampa spells rebellion to those familiar with the history of the region. The Rampa country forms part of the Eastern Ghats of India. It is a hilly area with elevations ranging from 500 to 1200 meters. The average rainfall is between 1600 to 1900 mm with 85 rainy days in a year and over 80% of the rainfall is received from the South-West monsoon. According to the Forest Survey of 1972, the forests of the area are classified into 3 groups Viz 52.8% high volume stature, 24.3% medium stature and 22.8% low stature. The tribal population of the region comprises of five tribal groups: Kondareddi, Kondareddi (Shifting cultivation), Koya dora (Cultivators preparing low land areas), Kond Kammara, and Valmiki.

Though the origins of each tribe is not well known, the general conclusion is that they are indigenous tribes with centuries of settlement and their own communal and territorial rights and privileges.

Not much was known of these people to the outside world until the British took over this region in 1765 and the Agency was constituted in 1794. Since then much is known about it as a region of series of rebellions. The British reaction to these early rebellions were one of compromise, largely because they saw the entire region as unproductive.

But by 1893, there was a change of attitude of the British because of the emergence of hills and forests as a source of enormous gain. The state assumed growing authority with the spread of formal institution of the courts, police and the expanding mobility provided by roads. All these forces together undermined the triditional economy and society. The revolts of the people of Rampa during this period was clearly against the state’s encroachment over their traditional rights over forest resources and those who got profited from their exploitation. Restrictions on podu (shifting cultivation), creation of forest reserves, increased axe tax, introduction of opium into the hills for revenue as well as subjugation of the tribals, prevention of the customary right to make toddy and collection of forest produce were the measures that drove the tribals of Rampa to rebel.

The post-independence period marked a hesitant approach towards the application of the forest laws in the beginning. It was not until 1955 that the ban on the entry of forest officers below the rank of Assistant Conservator of Forests was lifted.

The forest department established a saw mill in 1964 with an annual requirement of 1000 cu.m of wood mostly from Rampa. From there on the process of reservation of forests of Rampa country was a halted affair.

The brief account of the state management of the forest of Rampa country given above is proof enough as to the root cause of distressing condition of the forest resources. But it hardly reveals the impact of the growing destruction on the forest. To bring these aspects to light an attempt is made hereto focus attention on the impact of just one state sponsored activity viz., the establishment of a plywood factory in the joint sector with timber supplies assured by the state.

Before proceeding with the plywood factory induced experience, it may be necessary to digress to dilate some of the primordial links between the forest and the subsistence needs of the indigenous people. Strictly confining to the important tree species in the Rampa country that form as the source of subsistence Mango (Mangifera indica), Jack fruit (Artocarpus integrifoha) and Sago and Jeeluga (caryota urens) stand out as the most important ones. Their importance in the tribal livelihood is revealed by the fact that these were never felled by the tribals even in their Podu (Shifting cultivation) clearings. Ofcourse the Caryota palm which stops yielding sap is cleared but not as long as it yields the sap. For the Forest Department mango and jack fruit trees are the prized timber, the former more so for ply-logs and latter for interior panels. The Caryota palm is contemptuously cleared and burnt in the clear felling operations for promoting silvicultural practices.

Now let us return to the example of plywood factory in the Rampa country as an illustration of the impact of State monopoly in forest management. The Godavary plywoods was mooted as a joint sector venture in Rampachodavaram in 1972. The Forest Department entered into an agreement to supply annually a quantity of 7000 cu.m. of wood to the factory for a period of twenty years. The royalty was fixed at Rs. 70 per cu.m for plylogs (about 120 cms girth), Rs. 35 for saw logs (75 to 120 cms girth) and Rs. 12.50 per tonne of fuel wood. The East Godavary Forest Working Plan proposed the Virgin Forest of Rampa and Gudem Agencies and an area of 80,780 hectares was earmarked for selection of felling on a 20-year felling cycle. The factory started working from 1976 and worked on 9 of the 20 coupes.

With the rights and privileges lost, livelihood sources systematically destroyed, their environs robbed of the very fragrance of life, with the growing dependence on the wage labour of the forest and road maintenance and worst of all suffering the onslaught on their women and culture, the indigenous people of Rampa country await desperately for a solution, amidst the state owned and managed forest. In the outside world there seems to be a growing range of alternatives discussed that the tribals should become co-sharers in the new wealth created [“In forests, an idealistic vision” (B.D. Sharma)]. The 1988 Forest Policy heralds a new era in the “participatory management” of forests by the indigenous people, as the basic plank of mobilisation (ASC, 1994) and the liberation of the people and capture of State power only would solve the problem. But all these contending alternatives have one point in common: that State monopoly over forests should go.

**Annexure**

The importance of the mango tree in the subsistence economy of the Rampa country could be seen from the intermeshing of it in the cultural life of all the tribes. A large number of places are identified in the name of the type of mango available around. The beginning of mango consumption is marked by the celebration of a festival every year. Green mangoes are hooked down whenever needed for curry and soup. Ripe mangoes are never hooked down but only fallen ripe mangoes are collected. For two months (May and June)ripe mangoes form a staple food of the indigenous people. Mango kernels also have food value. Every family collects two or three large bags of kernals, dries and pounds them and uses it for making gruel and rotis. A rough estimate is that mango fruit provides food equal to one meal to one person every day for the entire season of two months. This is not to mention the birds, wild bear etc., which depend on the mangoes in the season and some of which also end up in turn, as a rich hunting haul for the tribal people. It may be mentioned here that wild mango trees grow into a huge size with canopy covering almost a hectare and the root spreading thin and wide with moisture retaining capacity.

The jack fruit and its stones offer another rich source of food for over a month in June. Besides the fruit, the stones also serve as a rich vegetables. The stones are dried and preserved in underground bins and used throughout the year. In the higher elevations of the Rampa country, caryota palm offers a rich source of food for almost six months from November to April. A ripe caryota plant gives a sap twice a day, morning and evening, to the tune of 2 gallons. The entire tribal village community, women and children included, consume the sap twice a day depending on each person’s needs. Women and Children in general consume less. The mixing of certain herbs makes it intoxicating too. By the perception of an average tribal, caryota palm sap provides food value equivalent to a meal a day to every person for almost six months of the slack summer season in every year. In fact the rich food value is writ large in their full cheeks during the season. The fable of the place is that the caryota sap season is a season to loosen the torn thread.

The pith of the trunk of the caryota palm is also used as food. A caryota palm which no longer yields sap is felled. The felling is a joint effort of all the villages. They select a tree and request the owner for permission which is usually granted. The felled tree is cut into pieces and shared equally with the owner of the tree. If the tree is on private land, he gets an extra piece.

The bark is removed, dried and pounded and the flour is used to prepare gruel and roti. The caryota flour from a log of about one and a half feet is sufficient for a family of five, for five days.

**Summary and Conclusion**

The Eastern Ghats are scattered hills spread over Tamilnadu, Andhra Pradesh and Orissa. These hills are the home for a number of tribes who have adopted themselves to the micro environments. Each tribe has a unique culture, language and life style.

The tribal communities are totally dependent upon flora and fauna of nature.

The type of agriculture practiced by them is known as shifting cultivation. They grow mixed crops depending upon fertility, duration and domestic requirements.

The tribals depend upon the various other sources of food from the forests besides what is cultivated.

But with dwindling forest resources, the tribals’ food security is threatened. The settled agriculture provides less than what is required for their sustenance.

“SAKTI” working in Rampachodavaram plans to initiate a biodiversity conservation programme by studying the diversity and conserving the same with the participation of the tribals, to enhance the quality of their lives.