8.1 THE ECOREGIONAL CONSTRUCTS

Given the flux and uncertainties in the region, where the phenomenology and context are ephemeral and cannot be clearly distinguishable, under the human dimensions (Erlandson 1984), the study areas are deciphered under the limits of the peri-urban fringe zone of the Hyderabad metropolitan area (HMA). Their physical, historical and ecological determinants are intercalated and an eco regional construct exercise is done. The holistic approach, done ‘apriori’ vividly portrays the human dimensions of the transitional continuum. Multiple realities are thus comprehended at the first level, to enable to seek institutional and peri-urban interface dynamics in relation to livelihoods.

The importance of rational planning for effective management is implicated towards first studies in micro planning and participatory initiatives for communities.

The peri urban fringe, is the dynamic transitional continuum, with the expansive metropolitan sprawl (NRSA and HUDA 1995) in tune with the changing institutional priorities, such as urban -rural communities, win- win situations, newer enterpreuner organisations and NGOs (ICRISAT 1998) on the other in the coming millenium.


Thus, it seems pertinent that we seek to explore towards deciphering the ‘context and setting’ more so under human interactions (Erlandson 1984) of the study area. The sustainable initiatives of a rural urban continuum, could in turn structure the dialogue between outsiders and insiders, (Shepherd 1998) multiple emergent stakeholders on the participatons continuum, towards CBSD initiatives, in the region.

An agroclimate zone is a land unit uniform in respect of climate and the length of growing period, (LGP) which are climately suitable for a certain range of crops and cultivations (FAO,1983 as quoted in Seghal 1983).
The study areas, in the geographic range of Rangareddy district can be classified as under-
Dry semi-arids (Troll 1965), wherein the emphasis is on the thermal and hydric variables and
the duration of the dry and humid months. The dry semi-arids, have 2.0-4.5 humid months,
with thorn savannahs. *(rf. Appendix I & II)*

Given the situations, of the amount of dependable rainfall in post rainy and hot dry
seasons, in the Hyderabad region as extremely small, as well as the annual and monthly
rainfall variations fluctuating on a large scale. Unreliable moisture is a key limiting factor for
both stable and improved agricultural production in SAT regions (Virmani et al 1978). The
water availability periods in the dryland station (Hyderabad), as indexed by Virmani et al
1976 is considered as priority, for the appraisal of farmer’s knowledge towards rationale
land use planning since it is a basic constraint factor. *(rf. Appendix III & XI)*

The NBSSLUP of the ICAR, have catogerised the agroecological regions, with the focus,
to aid in planning and optimum landuse and in preserving the soils and environments for
posterity (Sehgal 1993). The South Central Deccan plateau encompasses the Telangana
region (north of Andhra pradesh state is catogerised under agro ecoregion 7. The study
areas, in the Rangareddy district (inclusive of Hyderabad region), are catogerised under the
agroecological region 7K6D2 of the Indian peninsula (Sehgal et al 1993) as

<table>
<thead>
<tr>
<th>Agroecoregion</th>
<th>Physiography</th>
<th>Soil</th>
<th>Climate</th>
<th>Growing Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>7K6D2</td>
<td>k</td>
<td>6</td>
<td>D</td>
<td>-2</td>
</tr>
</tbody>
</table>

The characteristics of 7K6D2 are as follows:

Bioclimate- semiarids; Length of the growing period is < 90 days; Physiography is Deccan
plateau (K); Soils-shallow and medium, with mixed Red and black soils - (6), Telangana
plateau; Moisture index is minus 33.5 to 66.7 and classified as the climatic type DRY (D);
the growing period days (isolines) range from 90-150 days; per annum (II) *(rf. appendix IV)*

The annual mean temperature is HOT (>22° C), the AWC (available water capacity) per
meter depth is LOW (50-100mm)/medium (100-150mm). The soil depth is shallow (<50
acrea) /medium (50-100 cms). The soil texture is red-loam (clay <35%), or deep
clayey (clay >35% with AMC-High-150-200 mm). The dominant soil series are the
Kesireddipalli and Patancheru. The soil taxonomy (sub group) is typic pellustert and udic
Rhodustalf. Hot, semiarid climate with red and Black soils is indexed as 7K6D2.
The agro ecosubregion

As according, to the NBSSLUP, in their classification of agroecological subregions of India (1995), the study areas of the present investigations fall under

<table>
<thead>
<tr>
<th>K</th>
<th>Physiography</th>
<th>Deccan plateau</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Soils</td>
<td>Mixed Red and Black soils</td>
</tr>
<tr>
<td>D</td>
<td>Semi-arid</td>
<td></td>
</tr>
<tr>
<td>Dm</td>
<td>Semi arid moist</td>
<td>LGP 120-150 days synchronous moisture index: 33.3-49.9</td>
</tr>
</tbody>
</table>

The biophysical characterisation of the study areas, in the present study fits into the catogery of North Telangana Plateau region-Hot, moist, semi-arid ecosubregion (K6Dm4) as classified by NBSSLUP-ICAR 1995. (Refer Appendix V)

It is to be emphasized that the changing perspective has the LGP as 120-150 days and is designated as 'semi-arid moist' with synchronous moisture index as 33.3 to < 49.9.

The semi-arid agroecosubregion (K6Dm4) has the following features:

> Water balance: A dry period, with acute deficiency, which begins in 1st week of December and extends till May/June

> Soil types: Deep gravel (Patencheru series), dominant red-black soils, soil texture(sandy loam- loam sand): available water capacity-low; graveliness of subsoil; limiting choice of species; Black soils have higher production potential.

> Natural vegetation
Tropical, dry decidious/thorn forests
Common trees: Acacia, Azadirachta and Tectona (teak)

> Cropping system:
-Sorghum and rice based cropping system. Farmers usually grow rice, vegetable and chillies.
-Frequent drought in red soils (Dhabas and Chalkas have low water holding capacity).
-Vast areas have alkaline ground water
-Lack of technology under irrigated/unirrigated conditions
The area is desirable for water-shed management, dry horticultural crops like Zizyphus, phalsa, amla and irrigation crops like grapes, custard.

Soil degradation due to human-induced changes

The soil degradation (3rd approximation) due to human induced changes (NBSSLUP 1994), emphasizes that the information on cropping patterns and crop intensity in this ecologically fragile zone is not based on sound ecological principles, but purely based on short-term economic gains, in the form of cash-crops or land use changes, induced by urbanisation.

The region accordingly is indexed as

6 - water erosion, moderate loss of top soil affecting, 51-100% area.
   High severity of human induced changes
wt - loss of top soil
a - agricultural related activities - unscientific

A GIS-data base search, related to soil degradation map of Andhra pradesh, under the category ‘6’ (human induced changes), revealed that Hyderabad and Rangareddy districts are rated with the highest percentages (100% and 70.63%).

The Production System

Targetting the priority needs of specific production systems is regionally prioritised by SAT, keeping in the data of LGP, soil type, production crops, biotic and abiotic pressures and population. This is focussed in ‘synergism’ of methodology and management research as well (ICRISAT 1994).

Production system 9 (ICRISAT 1997) is indexed as

- Tropical, with intermediate rainy season
- Interspersed cultivation of sorghum, oil seeds and pigeonpea with locally irrigated rice
- Peninsular India
- Women provide much of the farm labour in SAT

As per the quick reference maps for production systems 1-10, ICRISAT(1994), the production system of the zones, at the Indicator 17 (searched in the GIS investigation) emphasizes the ‘Ranga Reddy District’ and Hyderabad District (per comm and courtesy - Draft copy Dr. Mohan Rao, ICRISAT).
The characteristics are deciphered as under:

<table>
<thead>
<tr>
<th>State code</th>
<th>Soil Map</th>
<th>Soil Class</th>
<th>Soil Texture</th>
<th>Predominant crops</th>
<th>Average max post rainfall</th>
<th>Min. temperature (Non-mar)</th>
<th>Average max. temp (June-Oct)</th>
<th>and rainy season temp.</th>
<th>Average amount of rainfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 (Andhra Pradesh)</td>
<td>Fluvisol</td>
<td>B</td>
<td>B</td>
<td>Kharif-sorghum; Rabi- Sorghum, Pearl millet and Pigeon Pea.</td>
<td>38° C</td>
<td>14° C</td>
<td>34° C</td>
<td>21° C</td>
<td>1000.00'</td>
</tr>
</tbody>
</table>

The reason, for integrating the GIS- Production system 9 for delineation has been, so that there exists a match between the ecoregional focus and the participatory methodological constructs, in the mode of investigations, since the context of the situation is apparently blurred at the start.

**Hyderabad Metropolitan Sprawl**

The Hyderabad urban conglomarate is estimated to have the following population details 1981 to 1991.

<table>
<thead>
<tr>
<th>Year</th>
<th>Population (in thousands)</th>
<th>Decadal Variation</th>
<th>Annual Growth rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>1,796,336</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1981</td>
<td>2,545,836</td>
<td>70.65%</td>
<td>5.51%</td>
</tr>
<tr>
<td>1991</td>
<td>4,344,437</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The study on the impact of urbanisation on the surrounding natural resources in Hyderabad and its environs, indicated a net loss of 100.43 sq.km of agricultural land and 5.97 sq.km of water bodies during the 1973-1991 period. Hyderabad is demarcated as the 'city of lakes' (per comm. Dr. Vyas, SQUEL, Hyderabad)

The National Commission on Urbanisation (NCU), The national policy on land-use have strongly reiterated the importance of urban planning to ensure protection of prime and productive agricultural lands to provide adequate 'green belt' pockets to reduce urban congestion (NCU 1987 as quoted in NRSA-HUDA 1994)
PRODUCTION SYSTEM 9 AND PERI - URBAN FRINGE OF HYDERABAD, ANDHRA PRADESH, INDIA

Fig. 8.1.1
HYDERABAD METROPOLITAN AREA
AND ENVIRONS, WITH ZONES

ZONE-I
SHAMSHABAD ZONE
- LAND FOR HIGH AGRICULTURAL ACTIVITY
- URBAN DEVELOPMENT SHOULD BE PROHIBITED
- PROTECTION FROM MUD QUARRYING
- IDEAL FOR GREEN BELTS

ZONE-II
CHENGICHERLA ZONE
- FOREST AREA
- DESIRABLE FOR CONSERVATION AS GREEN BELT
- SUITABLE FOR LIMITED RECREATION
- BUILT UP CONSTRUCTION AND STONE QUARRYING BANNED
- DESIRABLE FOR REGIONAL PARK

- ECOTOURISM?
- WATERSHED COMMUNITY MANAGEMENT (NGO OBJECTIVE)

Fig. 8.1.2
The zones I and II (covering the study areas - Chengicherla and Peddaspapur) have been proposed for conservation. The zoning maps suggest areas to be conserved and to be built up actively based on existing land use and earmark for conservation.

The HMA includes the municipal corporation of Hyderabad (MCH) 13 villages in Hyderabad district and 270 villages of the Ranga Reddy District and 23 villages of the Medak District and 40.77 km of the Secunderabad Contonment. The HDA covers an area of 1907.56 sq.km and encompasses the periurban fringe areas. (NRSA and HUDA 1994)

The study areas on the peri-urban fringe can be categorised as follows:

**TABLE 8.1.1**

**THE ECO REGIONAL CONSTRUCTS AND THE CONTEXT OF THE STUDY AREA***

<table>
<thead>
<tr>
<th>Dry semi arids</th>
<th>Troll(1965)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K6Dm4</td>
<td>NBSSLP-ICAR(1995)</td>
</tr>
<tr>
<td>Production system 9</td>
<td>ICRISAT(1997)</td>
</tr>
<tr>
<td>High severity of degradation due to human induced changes category No-'6 wta'</td>
<td>NBSSLP-Soil degradation 3rd approximation(1994)</td>
</tr>
<tr>
<td>Hyderabad Metropolitan Area (HMA) (56K6 zone II &amp; I)</td>
<td>NRSA-HUDA(1994)</td>
</tr>
</tbody>
</table>

* Chengicherla, Peddaspapur, (Ethbarpalle, on the outer fringe of HMA zones)
THE GROUND REALITIES

Dynamic interactions are less an outcome of predictable pattern of linear succession, but more a result of combination of contingent factors, conditions by human interaction, sometimes the outcome of management and often the result of unintended consequences

Leach et al 1997
8.2 THE GROUND REALITIES

While deciphering 'ground realities' it is emphasized that we are not embarking on a
generalisation, but perceiving a landscape under transitions capturing complexity and
tracking change of change (Abbot and Guijt 1998), because of the 'dynamics' of the
'environmental entitlements' which links livelihoods to environmental change and the
'webs of causation' (Meams 1995). Given the above perspective, networks, rather
than strict flows, involving multiple linkages is visualised for, rural urban linkages can
follow different paths (Tacoli 1998 a)

The reinforcement of the 'human-ecology' viewpoint, of CDR agriculture, in the realms
of the ecological footprint of Hyderabad metropolitan, is primarily due to the fact, that
rural urban linkages are influenced and intensified by macro level changes (structural
adjustments, job insecurity, increases in prices). Again, the linkages can vary according
to the local, historical, political, socio-cultural and ecological factors (Tacoli 1998).

SECTORIAL INTERACTIONS IN THE PERI-URBAN TRANSITION

The city, influences land ownership use, economic activities and labour markets, in a rural
area, which in turn significantly determines agricultural production and livelihoods in a study
area (Tacoli 1998 b)

Urban rural interlinkages, in the peri-urban areas is evident through the straddlers, who commute
for milk fodder (at Chengicherla village): floriculture (at Peddapur village) and tomato/vegetable
trade (at Ethbarpalle) parallel to this are the services like milk vending and small time employment
in granite/sand quarrying, temporary urban hawking of pottery, basket weaving and sale, small transit hubs for toddy selling, guava fruit sales and a lot more. Again the land use in land
markets are for increasingly influenced by real estate developments and speculative purchases.
The peri-urban areas increasingly seen as zones for leisure activities with the mushrooming of
country clubs and farmhouses, more so on the sectors of Ethbarpalle village. The presence of
new land ownership, urban settlements, are evident, through the prioritization of newer roads
within the village, as in Chengicherla and the blocking of sale of lands, on the highways, in
anticipation of higher monetary returns, as in Peddashapur village.

The maintenance of the peoples' perception of urban rural interlinkages establishes the
complexities in the livelihood of farming system. Non agricultural rural employment, occupational
adjustments, towards manufacturing and services and, self employment is evident in tailoring,
slipper mapping, toddy tapping, marketing of milk, fodder grass, tomato; as middle men in land sell outs mortgages and loans, with informal access to credit, small time traders in the city, is evident in the study areas. The above, indices of de-agrarianization, with a fuzzy spiral dimensions of commodity transfer, revolving in the 'ecological foot print' of the Hyderabad Metropolitan area, where production, the inhabitants and businesses are dependent, for various reasons. Gender and generational differences, political and socio cultural affiliation, apparently are the 'invisible' links (Maher 1988), in the process. Income diversification, as a necessity for survival is evident in the villages.

ENTITLEMENT ANALYSIS, AS A TOOL FOR NGOs IN PERI-URBAN ECO-ISSUES

While analysing the ground realities of the emerging rural urban connections as well as peoples' economic states as varied, given the historical socio cultural perspective of the Deccan plateau region (Gadgil and Guha 1992) in terms of the Telangana peasant farmer, it is apparently evident that day to day imbalances set in, which dictates their entitlement mapping, making it fuzzy (Devereux 1995). Thus we have an informal economy of people, at the rural urban interface, born out of necessity, unstable, more vulnerable, with an illegal work status (Bergen & Chatterjee 1998; Wickware 1998). In reality, the complexity of how the government and NGOs at the interface can address to changing priorities, the dynamism of the non-equilibrium ecology is debatable. In this context, the entitlement analysis, as an analytical tool, with suggested interventions (Seth 1997; Ahluwalia 1997; Leach et al 1997 c; Mearns 1995) seems an option to address towards transparency, community involvement, accountability, set backs or else newer opportunities. The 'scaling up' of the NGOs initiatives, can later be addressed as they perceive it.

Again entitlements erase and break, in the process influenced by various social actors, institutions (not structures, but human behavioural patterns, between individuals and groups) which operate at different scales, determine entitlement relations and there are multiple, complex process in operation.

We need be certain, and away from the clinge of per captia of energy food analysis for it is a snap shot in time. The objective is to track change of change as well as track change together and monitor human attitudes of change and behaviour (Guijt etal 1998)
URBAN AGRICULTURAL INITIATIVES

There is a evidence of beginning of church based community agriculture in Chengicherla village (Agape center); the newer entrants of urban biotechnology entrepreneur technocrats who have started 'floral nurseries’ (in Peddaspapur) and the hired wage agricultural labour towards newer initiatives in farm houses (near Ethbarpalle village). The negotiations and bottle necks, towards semi industrialisation (the Chengicherla village with Joint forest management initiatives amidst surrounding industrial belt and land sell outs), commercial uses (farm houses around Ethbarpalle village) and never residential/commercial lands (break down, sell / mortage of grape vine lands at Peddaspapur village) are at the confluence of livelihood issues of the marginalised CDR farmers in the study areas.

THE LANDSCAPE IN TRANSITION

The fringe areas of the neighbouring rural villages, presents a patchwork of urban development (newer roads, granite and mud quarrying transit vehicles and labour, residential and business establishments) land sell outs besides the continuing 'mosaic' of CDR farming, with dry crops (Sorghum, caster, tomato) and rice mono cropping (for subsistence and small trade sell outs) with significant ‘fallow lands’ with Parthenium species and Prosopopsis shrub – jungle and open access lands (under dispute due to illegal sanctions, incomplete housing with no occupants as in Chengicherla) or else as a patch with temporary water body (as in Chengicherla with the dobhi washermen community, and their services to neighbouring urban small towns), or else as dumping area for local wastes (as in Chengicherla and Peddaspapur villages) as well as a walk away connecting the main road (Peddaspapur village). Alternatively, the land may remain idle, with cattle grazing on grasses, over, abandoned/fallow rice fields, where the owners/inabentia farmers await either developmental permits or more properous market conditions (Kelly 1998), as in Peddaspapur village.

The everyday politics of relations between the landlords, tenants and other local power brokers create a context, in which the tenant farmers find it difficult to given asserts their legal rights to adequate compensation (Kelly 1998), in any event of crisis in the livelihoods of due to deagriculturalization.

In the mega urban region of the Hyderabad Metropolitan, the traditional dichotomy between the ‘rural’ and the ‘urban’ is apparently less meaningful, as evident from the different phases of transition, embarked in the three study areas. Again, within the same household,
LANDUSE IN THE STUDY VILLAGES

CHENGICHERLA

PEDDASHAPUR

ETHBARPALLY

UPPAL

MAHABUBNAGAR

LANDUSE TYPES

Settlement (Built Up)
Cropland (With Rice Monocropping)
Agricultural Area Fallow
Residential Growth Direction

Water Body (Temporary)
Primary Road
Grassland, Degraded
Kancha Under
Joint Forest Management

Granite Outcrop
Floriculture
Mixed
Farming/Herders
With Tomato Trade
Coarse Millets

Fig. 8.2.1
the urban industrial economy ‘social actor’ working in the ‘informal sector’ (Bergan & Chatterjee 1998; Wickware 1998) might coexist with agricultural productions the latter is supportive, in terms of the male part time farming (as in Chengicherla), the women and children as the ‘early morning’ work force (as in floricultural picking in Peddashapur) or else the resident household farming (as in Ethbarpalle) with the support of elderly farmers opt towards supervision in tenant farming (as in Chengicherla) or the options into a continued historical lineage of peasant pastoralism (again in Chengicherla). House holds, may be multi spatial, in the rural urban transition (Tacoli 1998 b), uncertainty and complexity is evident in the landscape for it is bleak one, with occupied houses (cemented with single window kitchens open hearth cooking; simple hamlets; fuel wood stocking; conglomerate of modern living-television, two wheelers, children getting prepared for urban semi convents, sparse cattle shed, mixed fodder, feed heaps and fuel mixes in the houses, as in Chengicherla village).

Cattle and land are important safety nets in the face of uncertainty in the urban life. Thus is evident among the local communities as rural assets, cattle and land resources. Rural assets have both monetary and social value, and serve as a safety net for low-income house holds with uncertain livelihood prospects, where rural and urban should be mutually reinforcing, intertwined as evident from the rural urban elements in the reality of household livelihoods (Tacoli 1998 a). Land conversions, micro politics of negotiations with the marginalised, is a complex issue, in Chengicherla with trade offs, where the displaced tenants receives disturbance compensation of cash or kind.

Land conservation, is a contested, continued and accelerated reality, in the landscape. It is evident, that two set of forces, work against the proper regulation of land conversions process. The first being the priorities of administration in terms of developmental strategies (HUDA –NRSA 1984), with the proposed zones for Chengicherla and Peddashapur region placing the relative importance to, agricultural versus industrial developments the second is the micro politics of power, the susceptibility, the influence, bribes or personal favours (Kelly 1998).

The urban-rural relations, while maintaining the household strategies, flow of exchanges, the new distinctive type of urbanization in which ‘rural’ and ‘urban’ co-exist, need be seen as existing in tension, as different priorities are played out a highly political struggle, in terms of both the consequences of land conversion (agriculture to urban uses), and the ‘process’ through
which the conversion is facilitated. (Kelly 1998). Spatial policies, addressed by policy makers, as well as sectional imbalances are apparently perceived by the locals.

Strategies with high priority for agriculture and rural development in many instances have the beneficiaries as large farmers and wealthy or well connected businesses. These strategies fail, often due to lack of recognition of the complexities of rural-urban interactions which involves spatial as well as sectional dimensions (Tacoli 1998 a). The reasons attributed to the above could be instances of 'over simplification of the reality (Ahluwalia 1998), and the growing evidences of confusion of the 'scales' of interpretation (Rhoades 1998). It is evident, that regulations and activities, as either 'rural' or 'urban' are more closely linked through space and sectors, than is usually thought. Thus, it need be viewed as a 'continuum',

While on rural-urban transitions, directions are far more complex than usually thought, and straddling the rural-urban divide, is vital for agricultural labourers, for provisions, food, market, temporary employment and under hardships, implicating flow of goods and their livelihood channels (Kamete 1998). The strengths of the rural-urban interactions and the interdependence between the city and the countryside (as remittance) does not allow the impact of structural adjustments programmes (Potts and Mutambirbwa 1998). This is apparently, the focus, where FEN breakdowns (Wisner 1998), disaggregated environmental entitlements, livelihoods and environmental changes (Mearns 1995) are the source of 'fuzziness' under CDR peri-urban landscapes, pertaining to communities and their livelihoods. Thus, the dynamics of institutions at the fulcrum of entitlement mapping or FEN is the focus of the research investigation. Channels of mobility are endured, due to stark necessity and lack of alternatives, as well as suitability to circumstances, and the rural urban transitions (Kamete 1998). Relationships are working, because they are informal, impromptu and people based and some of these activities are not exactly on the right side of law of existing policies and regulations. (Kamete 1998)

The stage, apparently seems set, to discern the pattern, which may be used to understand the micro-study. It is hoped that 'interactions' might be explained and livelihoods are 'focussed', and several questions on 'fuzziness' are revisited, to possibly seek out interventions, forms of 'enabling' and strategies, to the 'audience' (NGOs, researcher-based institute, vocational education).
HISTORICAL EDIFICE OF THE HYDERABAD DOMINION, PEASANT PASTORALISATION AND THE ETHNIC CULTURAL SIMpLICITY OF THE TELANGANA SMALL FARMERS

The following, are selections from the monumental work of Bawa (1994) quoted under:

- The Nizam’s dominions which began as a feudal survival of the Mughal empire, ended in 1940s, as a pseudo. Islamic Kingdom.

- Hyderabad state (1724-1948) was a major Indian State, with roughly the area and population of France. Salar Jang I’s rule (1853-1888) for 30 years, as a legacy, constitutes the reign and a value of the permanent record, in the history of Hyderabad state till about 1900.

- The State of Hyderabad, even in the twentieth century dominated by the political and social system of the Nizam’s Government, that no rival center of power could arise without its patronage and support. Access to the administrative office was the one goal of all ambitious men. Once a man achieved high office, he could use his authority to appoint relatives, friends and people from his home town or areas to posts in his department.

- Anyone who has lived in Hyderabad, for any period of time and mixed among its people, will realize that social cohesiveness is built around families, clans and tribes rather than broader religious categories of Hindu and Muslim.

- In 1956, the state of Hyderabad, was divided into three parts which were merged with the neighbouring states of Bombay, Mysore and Andhra Pradesh.

- The main origin of Hyderabad’s political tradition was the moghul policy, with no tinge of religion in the titles. In theory, the Nizams were bound by Islamic law, Hyderabad was not a Muslim state; it was always a composite state, following the Indian tradition of statecraft, and based on mughal traditions.

- The moghul system of land grants was to allot ‘jaguars’ to noblemen who were subject to transfer every three to four years. The merit of this practice was that it made the jagirdars completely dependent on the moghul favour.
The Jagirdars of Hyderabad had in theory, no proprietary rights and were entitled only to the revenue accruing from the land. In practice, however, the grant became hereditary, on payment of tribute.

Hindus and Muslims in the city of Hyderabad lived side by side and their conduct, conversation and dress was not dissimilar. The Hindus were appointed to the highest positions and enjoyed ‘Mansabs’ and ‘Jagirs’ in the Diwali portions of the Dominions; the Muslims were similarly employed in the ‘peshkari’ states and also by the Hindu nobility members of the two communities jointly took part in each other’s national and religious festivals. Persian was the written language and Deccani (antiquated urdu) was the spoken one.

Hyderabad faced a crisis of identity in its very inception. The state’s boundaries ceased to exist in 1956 and far more smaller than the original extent of the territory consoled by the Nizam.

Revenue officers and officials were a mix of Hindu and Muslim. At the traditional lower-level functionaries, the local languages (Telugu and Marati) was used...the system was exploitable and unjust, due to internal weakness.

It was the feudal character of Hyderabad, with to complicated system of jagirs, that continued, to the end, which determines the typical deccani-Hyderabadi character, of the locals (called ‘mulkis’).

The Local Perceptions

The Telangana region has always been in a flux. Changing social equations, unavailability of alternatives have been the norm in the dry terrain.

We have seen it all.. from the Nizam’s rule, to the feudal zamindari holdings of our lands.. to the upraise of Naxalism in the adjoining districts (Mahbubabad, Warangal, and Nalgonda), to the new advents of capitalism now.

(Memmu anni chusenamu dora, ah Nizam rojululo ninche Jagirdari ninche, naxalu-pakka gramamulo, mare ipudu kotta manuchelu mare paysalu)

Insiders’ personel sharing
Today, there is changed human relations into money equations. Though feudalism was bad, it had a strong value system, as implicated by the small farmers, in the study areas.

We, are honest and live simple lives. Respect to elders, our land lords still prevails here.

Barter and exchange is common here. We live by trust and openness. The Telangana farmers have been exploited by them. (the coastal Andhras).

The legacy of the divide, and the exploitation of the simple, rustic farmers in this region, by the new entrants (more so from the Eastern 'circars' or coastal Andhra Pradesh region), has been the root cause, for the 'silent revolution' of the separate Telangana agitation for statehood. The complexities of change, under the backdrop of historical perspective of the Deccan-Hyderabad, are apparently the roots and which are enabling, the adaptive human behaviours of the livelihoods of the locals, in the study areas.

The genesis of struggle against Feudalism

1. When the Indian subcontinent was bifurcated into two dominions India and Pakistan in mid August 1947, 'His Exalted Highness' Nawab Mir Osman Ali Khan, Nizam-VII, ruler of the Hyderabad Princely state, wanted Hyderabad to be an Independent sovereign state in close association with the two dominions and hence refused to accede to the Dominion of India.

2. To intensify repression against the democratic movement through the agency of Razakars, the volunteers army commanded by S M Kasim Razvi, leader of Ittehad-ul-mussalmeen. It was also the period, when the people demanded the merger of Hyderabad with the Indian union. This united the different....

3. The union of different political streams, including the communists all of whom combined to intensify the anti-Nizam front.

4. In the Telangana region, the struggle was led by the community and the Andhra mahila sabha, which initially started as a movement, against the feudalism and exploitation by the Jagirdars and Zamindars, who were the agents of the Nizam's regime.

The Democrat 1999 (Kumar ed.)
THE COMMUNITIES

* Within the sub ecoregion, categorized under Production system 9, in the peri-urban fringe and the rural hinterland of Rangareddy district, the varied perceptions of the insiders' are apparently indicative of the patterns of CDR agriculture/Farming systems (Chambers and Ghildyal 1985; Mearns 1995).

* The elements of 'livelihoods', in the study area, suggests that the communities are heterogeneous with multivariate livelihood strategies.

Discrete heterogeneous communities, in terms of the insiders perceptions and sharing, during participatory evaluation and monitoring (PM & E) – Abbot and Guijt 1998), as well as from other stakeholders during participatory evaluation (PE) – (Hammeijer et al 1999), such as NGOs, key informants, transhumans on the terrain are evident, in the study areas, in terms of their 'livelihoods and accumulated strategies' as under:

**TABLE 8.2.1**

*The elements of 'lcddu' - Local, complex Diverse, dynamic and unpredictable Livelihood strategies in the peri-urban fringes of the study areas, Hyderabad.*

<table>
<thead>
<tr>
<th>Village</th>
<th>Elements of 'lcddu' livelihoods</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Chengicherla</td>
<td>Wage employment; Small Farm Rice mono-cropping; Pastoralism; Joint Forest management; Basket weaving; Toddy tapping; Liquor-trade; Money-lending; Inabsentia or contractual farming; part-time farming; Land-sellout business; Sand-quarrying; Dairy and fodder trade; petty trade; wage employment; peasant pastoralism 'shadow informal work force (rural urban straddlers)</td>
</tr>
<tr>
<td>* Peddashapur</td>
<td>Small farming and wage labouring; Floriculture Trade; subsistence dry farming; Floral nursery; Rural-urban straddles; Money-lending; Land-sellout business; petty Trade; Granite and sand quarrying; Wage employment; shadow 'informal' work force (rural urban straddlers)</td>
</tr>
<tr>
<td>* Ethbarpalle</td>
<td>Mixed Farming and Tomato Trade; Peasant pastoralism; Sheep and goat penning; Transhuman pastoralism; Farm-house labour; subsistence Dry-Land farming; 'Unni' or Blanket/carpet-wool weaving;</td>
</tr>
</tbody>
</table>
ICDDU COMMUNITIES, LIVELIHOODS & ACCUMULATED STRATEGIES

Village - Chengicherla

I. Landless, migrants, *Gender-biased, dual Livelihoods in Joint Forest management and Rice cultivation as wage-labour* (women); male with options on contractual farming, or into ‘flux’ livelihoods as sand/granite quarrying, basket weaving, and as rural-urban straddlers

(25 households approx.)

II. Local, Native, with dual livelihood options of women working as wage-labour in Joint Forest management and in own Rice Mono cropping ± Household Livestock rearing; Male in High-Energy Input Rice-Monocropping, with accumulated strategies of Fodder and Milk flows to the city (rural-urban straddler); sometimes with part time farming, and on urban contractual, uncertain jobs, Linear Farming, no recycling; Next generation not in farming, negotiating “Land-sellout’ is optional. Last generation in rice monocropping

(15 Households approx.)

III. Local, Native, Women as Agricultural Rice monocropping wage labours and men in Joint Forest Management, Marketing and sub-contracting ‘Fodder’ to the urban areas; partially ‘sand-transporters’ due to ownership of bullock-carts;

(6 Households approx.)

IV. Local, Native, Post-Feudal, Large/Contractual Farming community (*Gouds*), with large Land holdings; Liquor barons; interests in landsellouts and are contractual/inabsentia farming too. Contract ‘*Fodder patches’* in Forest Management’ by leasing, from the Government; informal networking with other communities and Pastoralists; potential employers of wage-labourers for rice cultivation and negotiate access to ‘Kancha’ or grass cutting in the Joint Forest Tracts with diverse interests and transitional, Land sellouts.

(15 households approx.)

Village: Peddashapur

I. Local, Native, small landholding – marginal farmers, with gender in dual livelihoods of practicing Traditional Sorghum/Dry farming on own lands as well as cultivating/Wage employment in relation to ‘*Floriculture’*. Male as rural-urban straddler for
LIVELIHOOD ANALYSIS IN CHENGICHERLA VILLAGE

Fig. 8.2.2
LIVELIHOOD ANALYSIS IN ETHBARPALLE VILLAGE

Fig. 8.2.4

KEY

- TOMATO TRADE AND VEGETABLE GROWING
- UNNI - CARPET WEAVING ± DRY LAND FARMING
- SHEEP & GOAT PENNING
- ORGANIC MANURE SELLOUT ± BUY AND MIXED FARMING
- HERDING ± MIXED FARMING
post-harvest floriculture sale and diversified livelihoods (Fodder/milk/Vegetables)

Previous Cropping – Rice Irrigation potential – medium.

(100 Households approx.)

II. Local/New, post-feudal large farmers, in Grape-Floricultural Transitions (due to water-depletion, non-available labour); with newer city based entrepreneur and local wage labour linkages; Diversified interests in commercialization and land sellouts.

(10 Households approx.)

Village: Ethbarpalle

I. Local, Native entire family in mixed farming with traditional knowledge, herder-based village of organic manure is high, Return manures to soil Irrigation potential medium, Focussed on market economy of ‘Tomato’ with subsistence Dry Farming; Native Trees in the small Farms.

(40 Households approx.)

II. Pastoralists - Local, Native

A. ‘Unni’ carpet weaving-temporal livelihood along with Dry Farming of Sorghum sedentary Pastoralists and/or

A’. Trans-human Pastoralists, who migrate during summer, to return after the season.

(20 Households approx.)

B. Pastoral-peasants

Local, Native, entire family in Mixed farming, with traditional knowledge, accumulate organic matter, link with migrant ‘penning’ herdsmen, and are focussed on market economy of ‘Tomato’, with native trees in small farms cyclic return of manuers high.

(15 Households approx.)

4. The categories of communities are recognised, from the insiders’ dialogue and participatory methodologies as tools, and on the basis of the perceived criteria generated ‘apriori’ (a) Local/Migrant-landless (b) Gender roles in terms of environmental changes (c) Traditional/Transitional Farming – Linear/Cyclic (d) Farming and Pastoralism/Rice monocropping/ Floriculture and Dry farming/Mixed Farming (e) Households are inclusive of urban and rural elements in wage-labour.
5. The multiple-options, in time and space, in the peri-urban fringe of Hyderabad, is apparently seen to determine their adaptability, livelihood strategies, with visible and invisible links, towards shaping their own eco-setting. The endowments and entitlements, are apparently ‘Fuzzy’ due to the complexities and transience of the landscape and livelihoods (the insiders perception matrix). An ‘entitlement analysis’ (Leach et al 1997) could possibly seek to explore the ‘dynamics’ of the ‘processes’, within each ‘livelihood’ prioritized, by the insiders. This in turn can possibly decipher the ebbs and flows in the changing landscape under ‘Icddu’ Livelihoods.

The Insiders’ perspective

The Farmer First Approach, as conceived by Toulmin and Chambers (1990) opts to address the Resource-Poor Farmers (RPF), who have less control over physical conditions, less access to inputs, have varied priorities (Food-first, sale of crops as second and risk reduction strategies). The results, of the present investigation, through the methodological framework, reveal the insiders perspective of the contemporary peri-urban transitions as under:

* What they feel is around?
* What they do- How do they communicate?
* How situations are viewed by the researcher?
* Where is the fix?
* Can we seek through NGOs?
* Can we perceive the realities?
* What is lost?
* What they see as non issues?
* What do they seek out/promote?

Surveys, interviews and responses: The local micro reality under the chaos of uncertainty of daily needs and ‘survival options’ was probed when, the respondents to initial attempts to survey methods and their judgements towards government surveys indicated:

* I do not have the time for it
* No one would reveal the actual wet land holding
• Food habits? We have an uniformity of food habits. There is no major change, except for the Sunday non-vegetarian(chicken) meal

• The Government(Janmabhoomi – people's programme) is -whitewashing our compound walls, planting trees and more of public address campaigns – a political stunt – we have seen many of these. - again, they address to the local political clouts and not the real problems

• Judge it, by the audience and follow up. We are fed up with surveys.

• Government surveys? We know, its an add on, by numbers approximately to the previously to the previous years(the local school teacher outsider -insider, involved in the survey comments)

• What do I get from all of this?

• Many may have come, its always the some-promises, promises and nothing concrete!

• Can you get me a job? Can you help get me loans?

• Please, our livelihood is shrinking, as a pottery or a carpenter or as a "Unni" Carpet-weaver, can you help our case or address to some one to seek our grievances? Where do we go, when resources are shrinking and urbanization is taking over?

Thus, it is easy to comprehend that ecological issues are seemingly non-issues. Livelihood security are apparently the real issues.
**TABLE - 8.2.2**

**THE HUMAN ECOLOGY PERSPECTIVE - UNDERSTANDING PEOPLE'S BEHAVIOUR IN THE CHENGICHERLA, PEDDASHAPUR AND ETHBARPALLE VILLAGES**

*What they cope up with*
- Everyday crisis for survival
- Land conversions (large farmers)

*What they see as non-issues*
- Community-based sustainable development
- Eco-development
- Government interventions (Janmabhoomi)
- Cultural food preferences.

*How do they communicate*
- Farmer networks
- Informal modes (primary)
- There are multiple actors and linkages (Ramirez 1997)

*Incentives are in*
Fertilizers, seeds, pesticides (the delivery window for farmers, since decades and continuation of GR agriculture, through extension education)

*What they do*
- Seek adaptive strategies
- Maximum need diversification
- Economic stakes of FEN is in food, fuel and fodder
- Seek small employment options.
- Seek small enterprise integration (interventions) farmer participation, and seek out risk free farming
- Seek to integrate with market economy
- Perceive factors, Products, Capital markets (Signals)
- Seek immediate economic incentives + food security

---

Cont'd....
What they feel is around

- Commercially privatised agro business.
- Micro shifts in prices Tomato Rs.4 to 40/- kg
- Narrow focus of agricultural research stations, irrelevant to local situations.
- Politically rich farmers with post green revolution entrepreneur market forces
- Unreliable, erratic rainfall, water shortage, irrigation current cess and increasing borewells
- Fallow lands, extremely low fertility and drought
- Unreliable market trends
- Access to middlemen
- Non access to timely supply relevant inputs
- Debt-trap and barter with large farmers
- Negative fall-out, from continued lineage of small peasant pastoralism
- Third generation farmers prefer education / urban jobs
- Men/women seeks temporary migrations - wage workers
- Post harvest vending - vegetables, milk to neighboring fringe areas
- Expanding consumer preference opportunities (Floriculture, Tomato)
- Farmers have limited resources
- Agriculture research does not reach Resource Poor Farmers in fragile SAT regions
### The Insiders’ Perception matrix of Complex, Diverse, Risk-Prone Livelihoods in peri urban fringes of Hyderabad

<table>
<thead>
<tr>
<th>The Landscape</th>
<th>Food production</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topography is mostly undulating</strong></td>
<td><strong>Is prioritised for market economy and alternative commercial crops (Floriculture, tomato).</strong></td>
</tr>
<tr>
<td><strong>Soils are shallow red sometimes mixed black</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Irrigation is unreliable (water tables are dwindling) and they have less control on it.</strong></td>
<td></td>
</tr>
<tr>
<td><strong>The farm-units</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Size is small, irregular and noncontiguous</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Farming</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Is a risky proposition.</strong></td>
<td><strong>On a ‘day-to-day’ or weekly accumulated strategy</strong></td>
</tr>
<tr>
<td><strong>Has access to external government subsidised fertilizers, seeds and pesticides</strong></td>
<td><strong>By rural-urban straddling by off-farm/non-farm/diversified activities.</strong></td>
</tr>
<tr>
<td><strong>Unreliable supplies is major limitation</strong></td>
<td><strong>Shadow ‘informal’ work economy exists, which is not accountable by census.</strong></td>
</tr>
<tr>
<td><strong>Labour dependency is on Households to a large extent</strong></td>
<td><strong>By informal networking.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Households and farming</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Has rural and urban elements in their livelihoods.</strong></td>
<td><strong>Farming may not be the most important proposition</strong></td>
</tr>
<tr>
<td><strong>Mostly on credit barter and sharing (fuel, fodder, food) due to seasonal shortages/fluctuations of drought &amp; food) and uncertainties of livelihoods</strong></td>
<td><strong>Part time farming is a reality</strong></td>
</tr>
<tr>
<td><strong>Mixed fuel options are sought.</strong></td>
<td><strong>Subsistence dry farming may collapse.</strong></td>
</tr>
<tr>
<td><strong>Prices are high on inputs and lower for outputs.</strong></td>
<td><strong>Their future livelihoods may change, more so of their children.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Can they distinguish Food &amp; Environmental entitlements?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In most instances, No-because their short term survival strategy is the priority and under flux the fuel-scape and landscape is not distinguishable, as both are breaking down.</strong></td>
<td><strong>Is prioritised, to overcome vulnerability, under the changing peri-urban ‘flux’.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Views on Food-entitlements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Our Food- habits are simple</strong></td>
<td><strong>We do not starve</strong></td>
</tr>
<tr>
<td><strong>We commodify ‘food production’</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:
- Mental entitlement?
- We do not starve
- Short term survival strategy is the priority and under flux the fuel-scape and landscape is not distinguishable, as both are breaking down.
FUEL MIXES, TRANSIENCE, AND SIMPLE FOOD HABITS

The experience of ‘living and sharing’ (Chambers 1998) with the communities revealed that the typical meals as well as the fuel-use has no alarming variation in their life styles due to rural urban straddling, urban fast foods (biscuits, bread) as well as en-route / local access to fruits (Gauva, Papaya, Mango, Custard apple) and vegetables (Tomato, Cucumber) which tend to be their apparent accumulated strategies in addition to their typical food habits.

A typical Telangana farmer’s meal

* Breakfast : 1. Tea and rice/Sorghum porridge (kandi) or leavened wheat or bread/ 2. Leavened sorghum dipped in tamarind pulp and cooked pulse soup.

* Mid-day Lunch : (several cups of Tea consumed) option (i) Rice cooked with pickle seasoned (Tamarind, neem leaves or mango or sunnhemp) or the typical breakfast (ii) option (i) seasoned with onion chilly - garlic

* Evenings Tea (optional )/ Milk
* Dinner Breakfast option (i) or (ii)
* On Sundays Consumption or meat (chicken, goat or sheep) is optional, for non-vegetarians

The consumption of egg(s) is varied

* Milk is primarily a commodity to sell and consumed is small quantities for tea preparation
* Consumption of curds and buttermilk is not customery used by migrant northerners (Maharastra state)
* Common vegetable ingredients : Tomato, chilly, brinijals, tamarind, onion and garlic.

Access to fuel is need based, fluctuating and use of ‘fuel mix’ as a buffer is common under emergency conditions, 500 ml of kerosene is bought and the open hearth is lit, with accumulated fire wood - branches and twigs from the nearest source is accessed.
PLATE I

FUEL WOOD, DRIED COW – DUNG, STACKINGS
AT THE BACKYARD – A TYPICAL HOUSEHOLD IN CHENGICHERLA

PLATE II

TYPICAL KITCHEN IN SMALL HOUSEHOLDS
WITH FUEL MIXES – PEDDASHAPUR
Participators perceptions on fuel wood

The ground realities of the food and fuel access and control, reveal that,

Energy issues are an useful entry point into the human ecology of rural communities but that particular set of energy issues and technology will depend on the socioeconomic and environmental situation, as well as the way in which local problems are ranked in local perceptions (Wisner 1998)

Under transience the participatory perceptions of the local communities in terms of fuel issues from the case study villages is as follows.

At Chengicherla
- "Thumma" is a preferred species, accessible from the dhobi ghat. I don't have to ask anyone.

- Sometimes, we, women go towards the outer fingers of the forest even to no man's zone, between the two villages, to cut wood. May be once week or once in 10 days.

- My Husband, gets a few piles of broken twigs and little wood on his way back by the bicycle. He returns from the city work at 5.00 to 6.00 pm.

- There are various places where fuel-wood is available in and around the village. We get it (my wife) from the work places and by barter.

- My husband, collects wood, during this return, from sand quarrying or when he walks home, from the neighbouring villages.

- Jaleel the forest guard allows us to collect fallen twigs and branches only. In an event of marriage or death, wood-stocks are given from the degraded forest patch on request.

- If I pen my sheep/goat, in his field, Goud-seth (landlords) allows me to collect fire-wood from the fallow-lands Sometimes if I need to supply him organic manure, he allows me to take cut branches from large trees instead of paying me cash.

- Sometimes purchasing dried cow-dung as well as barter on kerosene/fire wood is common among the families here.
* We cut the shrub branches while grazing the cattle as per needs from there (indicating disputed lands under urbanisation)

_At Peddashapur_

* Thumma is accessible from the common land in the entrance of the village.
* We get our own fuel wood from dry cropping of fodder sorghum and pulses and its stalks.
* Kerosene is purchased in excess now because most of us are in horticulture cutting and the children go to school. We don’t have time to collect.
* By barter we access fuel wood from the large farmers in small heap-loads every day and do not accumulate them.
* I am a contractual agricultural labour. I negotiate by barter exchange of fuel wood branches to enable my friends to carry the floriculture produce and market it for me.
* Floriculture operations start from 4.30 to 5.00 am in the mornings. My children and the women here have to rush to work and come back. Our husbands go to town for trade of flowers or else seek alternatives. Meanwhile the children should again go to school. Collection of fuel wood or cooking though difficult during the rains or winter can somehow be managed. We want to increase our earnings because the cost of living is high nowadays.
* Under in absentia contractual farming I utilize the fuel wood from the trees in the farm as well as wherever available, by barter of fruits, vegetables and trade contracting for them.
* When I go for floriculture picking, my son lights the cooking hearth and the rice porridge is cooked.
* Whoever has free time, would collect fuel wood or buy kerosene as per needs and when told in the house. My son advises me to use a kerosene gas stove and save time.
* We are not getting good fuel wood. It takes a lot of time to burn. I use kerosene gas stoves now.

_At Ethbarpalle_

* Fuel wood is available all around. On our return from work in the fields we cut the lots (twigs and branches) along the roads or from our own fields.
* We collect fuel wood from the open access land too whenever required from there.

* The agricultural residues in the farm lands are our prime sources of fire wood too. We can recognize the trees in the village which are used for many purposes.

* We use the sorghum fodder stalks heaped on our lands as the fuel wood in most instances.

* Under emergency conditions we use kerosene (from the rations) but we have never purchased firewood for money in our village.

**Towards Energy for livelihoods**

The socio-cultural living in the Telangana region has been a mix of the lethargic early morning leisure options of yester-years (when dry farming was the norm) The late starts by gossip and a cup of tea, the lay back attitudes of the Mughali culture the entire ‘potpuri’ of the village waking up late. (in most instances, the porridge for cooking is it at 6.00 am to 7.00 am, and the cooked food is placed on the platform, for anyone, in the family have an access, at convenience)

The peri-urban scenario, now, caught up to the realities of mega city construction boom the Informal economy of wage workers and the demands of newer adjustments to livelihoods, with the shifts from food *per se* (the closed agroecosystem) to market oriented, Floriculture, As well as Tomato /vegetable trade, have apparently created newer micro dimensions of the food - energy nexus.

Thus we have, shifts from energy for labour time saving (through adjustments and accumulation strategies of simple cooking and barter, shared energy access by gender, multiple perspectives towards fuel options), so that the households are into 'energy for livelihoods', such as

* Wage labour in floricultural operations (women and children, start at 5.00am, return to cook and start to school).

* Men folk into transit of produce - floriculture (in Peddashapur) and tomato/vegetables (at Ethbarpalle)

* Options of menfolk towards secondary market nodes which are pick up points, for day to day ‘monetary gains’ on sand/granite quarrying or masonry labour in the city/ Adjoining Belts.
The above, is typical of shifts towards energy towards reclamation/relief works

"There is no one, who would not be employed here. People survive by granite quarrying and even selling sand." (per-com VAO Peddashapur)

Women folk and a few men in Chengicherla, participate in rehabilitation of degraded forest track as a part of ongoing joint forest management programme.

Construction of water harvesting micro bunds, excavation of undulating terrain's, pitting and dibbing, gap planting are varied dimensions of relief operations done by wage labour on a daily basis.

Given the multispatial rural urban elements in the households (Tacoli 1998b) seeking out diverse portfolios (Chambers 1998) the norm, towards accumulated strategies, apparently for social subsistence.

We recognise that fuel wood plantations can help the women, to seek out easy access to the daily requirements. Again, being nearer to the city, fuel mixes are common. The fuel needs of the marginalised is kept in mind, and their priorities are focussed in the 'choice of species' in the JFM rehabilitation programme.

- NGO, Chengicherla

We are disgusted with the massive 'Bio-Mass' Fuel programme of the VASORD NGO here. We were given subsidies to purchase smokeless challis and as a community built the Bio-gas plant. But, now we do not have water to pour into the system. He promised us everything jobs, training and sought our assistance but today he is working, with the other 'marginalised' community (Lambada tribal hamlet)

Local participants, Peddashapur

Fuel wood is not the problem housing water access, Education, and market opportunities related to their livelihoods, elimination of middle men is the priority here

NGO, Ethbarpalle
The participatory evaluation of issues, suggests that Gender, human ecology and energy are implicated in the human ecological perspective of traditional small scale agriculture (Marten and Saltman 1986). Again, while understanding 'change', it is important, to know the ways, the members of the rural household use their labour and division of labour (Thandee 1986).

However, given the peri urban changes, complexities, intricate co adjustments, flexibilities, adaptations to uncertainties, fluctuations and options towards newer opportunities are possible routes of the small livelihoods. The human ecology perspective, provides the 'holism' needed to comprehend the interactions (Marten and Saltman 1986)

The contemporary institutional setting at the macro level of the study areas can be indexed as follows:

**TABLE - 8.2.4**

**THE CONTEMPORARY INSTITUTIONAL SETTING**

<table>
<thead>
<tr>
<th>Geographical</th>
<th>Deccan Plateau</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spatial</td>
<td>Rural Hinterland of the capital city (Hyderabad Metropolitan)</td>
</tr>
<tr>
<td>Temporal</td>
<td>Rural-urban transitions, Megacity environment</td>
</tr>
<tr>
<td>Agroecological zone</td>
<td>Production system 9 (Subecoregional K6DM4)</td>
</tr>
</tbody>
</table>

**ISSUES**

- Separate Telangana movement
- World bank loans
- Hi-tech (cyber) & Biotech parks
- Science city in north / south transitions with national laboratories.
- Influx of Maharasra Industrial Farmers
- Cross - cultural impacts
- Feudal zamindari micro niches and pastoral-traditional farmers
- Market economy and trade linkages to floriculture and vegetables
- Forestry department with World bank sanctions.
Analysis is a much more complex and culturally-specific skill than is often assumed. It does not happen automatically, it has to be structured; it is not contained within a method, but in sequences and debates; it does not reply on 100% participation but can still be inclusive... Participatory processes without prioritising analysis is a lost opportunity for external organisation and communities alike.

Guijt and Su Braden 1999
8.3 THE CHENGICHERLA VILLAGE

CASE STUDY #1

PASTORALISM AN ADJUNCT TO RICE CULTIVATION AS A RISK– AVERSION STRATEGY

Peasant -Pastoralism - a tradition

Chengicherla, has traditionally been a fodder-rich village with the typical peasant-pastoral livelihoods of the Deccan Plateau region. Socioculturally, and historically, pastoralism has been an integral component of livelihoods of this region (Prasad 1994; Gadgil & Guha 1995). Despite the accumulated strategies of adaptations, to the peri urban landscape as well as drought and uncertainty, the small farming communities, practicing pastoralism, are the ‘Golla’ (11.6%) and economically rich liquor-toddy tappers – the ‘Gouds’ (11.8%) in the village. The ‘Golla’ community, per se in the Telangana region are the traditional pastoralists, in this region, with a lineage. They are local, settled pastoralists, with herding as a capital investment cropping and livestock husbandry which enhances their subsistence security (Adamou 1991, Bayer and Ann-waters Bayer 1991).

The lack of comprehensive record of the livestock consensus, (per comm. Esther, NGO) negative attitude (towards previous surveys) to address to the professionalism of the pastoralists, Scholte et al (1996) is evident, from the oral testimony of the older pastoralists in the village.

'We have never been addressed to in any governmental initiatives and feel neglected. I am certainly not being benefited by any of these surveys. I am talking to you, because, you are a teacher, for my son.'

Local Pastoralist

Newer Accumulation Strategies

Despite, the previous rivalry of land grabbing, encroachment and ‘invisible’ forces of political land settlements, between the local peasant communities (the Scheduled castes – ‘Golla’ and ‘Maadigas’), with the new entrants, in the 1970s (the ‘Gouds’ and the ‘Mudiraj’ communities), the native peasant – pastoralists of yester years, have adapted to changing circumstances and apparently have forged newer partnerships, with the different ethnic groups, with the larger farmers (the ‘Gouds’ and ‘Reddys’) the in absentia
farmers, as a survival strategy. Herd accumulation, the night penning in open fields, supply of organic manure in the market (where the large farmers act as middlemen, in the transactions, are the prime advantages from the pastoralists, to the ‘Goud’ client farmers, in return of favors such as restricted grazing rights of fallow-lands, rights of passage through farmers fields (access-time to small herd water-points - from bore-wells) and barter arrangements (a bag of rice or the fuel wood from a cut-tree or short hand – loans for personal reasons)

Households, Pastoralists and Itenary Routes

Among the locals, the number of households with goats and sheep are with predominance of the rice- monocropping communities. The community elders (aged 60-65 years) and the younger entrepreneur farmers (aged 13 – 18 years) continue the traditions of grazings, penning and mobility of the herds, towards forage and water, on a daily or thrice a week basis, in Chengicherla.

The younger peasant pastoralists assists the elders in market sale transactions of sheep/goat, under varied circumstances (during ‘Ramzan’ and ‘Idd’ seasons). Herd mobilization is restricted to the elders and smaller children.

Thus, work, being divided between two generations is evident (Adamou 1991). Their migration-routes or itineraries implicate the local area restriction, within the boundaries of the village, access to the common property resources and the no man’s land which is apparently under land disputes/ sellouts and into the zones of urban plotting of the neighbouring village - a rare variation. The constraints, of access to water and fodder grasses, is evident too.

Personal decision-making strategies are diagrammed in terms of itenary routes, mobility to high-lands during dry season (Reckers 1997) and towards flexible feeding of cattle and livestock near the plains and homestead. With continuing drought, individual herd-splitting, coping strategies of allowance of children (aged 10-15 years) to herd and fixed migratory routes are decided. Stock-friendships exists between traditional families, and social networks is strengthened by bride-price, (Adamou 1991) and livestock presents. The feeling of affiliation and solidarity as the ‘Golla’ communities (Backward class), is
evident, among the 25 households, and reinforced by the older as well as the younger family members. Often the young old take the name of ‘Golla’ as their first/second name- a distinct identity in the region.

**Pastoralism and local Traditional knowledge of the forest area:**

The elder Pastoralists, easily recollect the previous drought-years and apparently perceive the local floristic diversity and multipurpose use of the trees in the forest tracks. (oral testimony) which matches with the Forest Flora of Telangana literature. This emphasises the need to document the indigenous knowledge (IK) of the ‘insiders’, so as to strengthen ‘the rationale’ (Jodha 1995) of their socio-cultural, traditional folk-lore and customary local diversity, under situations of interventions. People’s realities, towards rehabilitation strategies in JFM, as an ongoing programme apparently need be refocussed and strengthened, from such IK inventories. (Tab. 8.3.17)

While understanding the there is no infrastructure for para-veterinary services, and irregular and fluctuating market-networks towards as the reality of herd-sellouts which exists, the pastoralists are into varied adaptive strategies in the context of the dwindling common-property resources and the effects of the urbanisation.

**Peri-urban effects and Pastoralism**

For the entrepreneur peasant-pastoralists, parallel to their small time ‘contractual jobs’ in the surrounding industries as wage labourers or else on monthly milk vending to homes in neighboring colonies, secondary market-nodes, or as large milk-collectors for the urban-markets, directly, they strive towards the

* **Flow of goods**: sellout of goat/sheep ‘during the Muslim festival seasons, or on an unprecedented economic crunch to the local market or accessible slaughter-house, for a negotiable amount or contingency transactions.

* **Flow of information**: They perceive market prices sale and buy of herd(s), available veterinary services in any ‘Shanty’ markets, organic manure transactions and middlemen deals, to co-ordinate outsiders access to their manure sources in Chengicherla village, on a contractual/ contingency basis. The ‘Goud’ farmers, sometimes negotiate the contracting with partners. Thus emergent and adaptive fuzzes in transactions is evident.
• **Flow of money:** They negotiate settlements and transactions, on multiple issues such as sale/buy sheep or goat, old fallow/degraded lands, agricultural fertilizers, sale/auction related to Trees on their farmland and cattle. Distress sale however is a rare event and mutual community 'pooling' of money, based on older negotiations is common, in the community.

**Adaptations to the changing environment:** Pastoralism, common-property resources and fallow-lands - a losing perspective

Given, the solidarity of the 'Golla' community, a no-conflict mechanism, is adapted, by the house-holds, as evident from their late-evening sharings. This is expressed as a method towards maximizing their migrating opportunities, within the 'niche'. They are allowed, into the fallow-lands of in absentia farmers and large 'Goud' farmers (through informal sanctions). They seek out, towards traditional rights, over the edges of CPRs (the *Prosopis*, for livestock feed). They acknowledge their lost claims and the changing scenario of the urban-edge. The pastoral farmers, recognize the 'premium' associated with lands sellouts, through their younger lineage-urban based youth.

'My grandson, asks me to stop, cattle and Sheep/Goat grazing. We can sell our small land-holdings and seek urban jobs in the future'

*Pastoral farmer*

Access into JFM tracks is prohibited, while some elder Pastoralists recollect it as their territorial right, in the previous years. With the breakdown of Fallow lands, CRPs, their newer priorities are in 'diversification' to peri-urban small time trade and commerce.

**The mechanized Abattior Sanction (in 1998-1999 by the government)**

Keeping in view, the 'local' or nativity issue, the residents of Chengicherla, more so the 'Golla' community, apparently perceive, that the mechanised Abattoir sanction as an opportunity, to express their preference to being locally employed in any operations, in the new venture. Few of the Pastoralists, contend that the sale of animals (sick animals) could probably fetch them a better price, at the Abattior.
**JFM, capacity building and newer directions**

The Forestry Department and the NGO had initiated efforts by towards ‘capacity-building’ of the pastoral communities, in early 1990s. This was facilitated by NABARD sanctioned-loans, co-operative banking loans for purchase of livestock, and towards dairy-based entrepreneurshp. In the next ongoing phase (1993-98), the reclamation of the degraded forest track, is evident. The ‘insiders’ views and their priority-ranking towards tree and fodder species are given in the Tables 8.3.12 and 8.3.13.

In the next phase, the Forestry Department has earmarked ‘Sheep rearing, dairy entrepreneurshp, milch-cattle and mixed farming’ as possible options towards ‘People’s participation and livelihoods’ in JFM (per. comm. Vidyasagar IFS and Esther Suhasini, NGO-Chengicherla) The pastoral-peasant households, apparently perceive these initiatives directly from the womenfolk, who are wage-labourers in JFM grass cutting, the NGO, as well as the Forest guard, through informal meetings and exchanges.

The ‘Golla’ and ‘Goud’ communities are apparently, viewing the developmental initiatives, as a positive factor, in their livelihoods, due to mutual advantages of lease auction of fodder-patch by the ‘Gouds’ from the Forestry Department and fodder cum sheep rearing as an economic enterprise with infrastructure support on ‘cut and carry basis’ for the pastoral-peasant communities. However, skepticism, towards the future of JFM, is perceived due to the enigmatic sanction of an Abattoir near the JFM track (can it affect their livelihoods?) and the realistic possible non-continuation of their lineage into herding, due to urban effects.

**Pastoralism vs-Agricultural labour and related activities**

In the rice monocropping households, the division of labour exists, in a broader theme, as older-traditional menfolk with their grandchildren opt towards herd-accumulation and grazing. They practice ‘herd-collection’ from the Goud families and graze them, thus herd-mixing is common, as evident from the herders mapping.

Entrepreneur pastoral-peasants, opt towards livestock rearing and market-linkages of milk and fodder flows, simultaneously working on farm-lands (own) or as agricultural labour). Women folk and adolescent children have varied options of working in JFM, agricultural labour and milking the cattle. Livestock keeping is viewed as a labour buffer’ more so as a survival option gives the situations of rainfed (inherently low), agriculture and
### TABLE - 8.3.1
RURAL- URBAN INTERACTIONS- CHENGICHERLA

(A) **INTERACTIVE CHANNELS - FARM TO SMALL TOWN-MARKET PLACE MOVEMENTS**

(Chengicherla village to Uppal market place and Hyderabad Metropolitan)

<table>
<thead>
<tr>
<th>For suppliers, services</th>
<th>As a market trade centre</th>
<th>As a workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>Milk</td>
<td>House keeping</td>
</tr>
<tr>
<td>Education</td>
<td>Fodder</td>
<td>General daily labour</td>
</tr>
<tr>
<td>Health</td>
<td>Fruits</td>
<td>Seasonal and contractual</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Thached baskets</td>
<td>small labour in</td>
</tr>
<tr>
<td>Transport</td>
<td>'Kancha' grass</td>
<td>-masonry work</td>
</tr>
<tr>
<td>Posts and telecommunications</td>
<td>Sheep/goat</td>
<td>-sand quarrying</td>
</tr>
<tr>
<td>Trade contracts</td>
<td>Rice</td>
<td>-Granite quarrying</td>
</tr>
<tr>
<td>-selling plots</td>
<td>Organic manure</td>
<td>Business &amp; small trade</td>
</tr>
<tr>
<td>-country liquor(Toddy)</td>
<td>(Dried and wet cowdung)</td>
<td></td>
</tr>
<tr>
<td>Seeds Pesticides, Fertilizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repairs and maintainance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(B) **INTERACTIVE CHANNELS : FARM-LAND IN THE LIVELIHOODS**

<table>
<thead>
<tr>
<th>Farm as a source of supply</th>
<th>Farm as a market-gate</th>
<th>Farm as a place of employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rice</td>
<td>Rice</td>
<td>Casual labour</td>
</tr>
<tr>
<td>Milk</td>
<td>Milk</td>
<td>Teaching</td>
</tr>
<tr>
<td>Fodder-grass</td>
<td></td>
<td>Self-employment (tailoring)</td>
</tr>
<tr>
<td>Meat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fire-wood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organic manure</td>
<td>Organic manure</td>
<td></td>
</tr>
<tr>
<td>Local country-liquor(Toddy)</td>
<td>country-liquor</td>
<td></td>
</tr>
<tr>
<td>Guava</td>
<td>Guava</td>
<td></td>
</tr>
<tr>
<td>Rice cereal straw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bricks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thatched basket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleased clothes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>Vegetables</td>
<td></td>
</tr>
<tr>
<td>Small-scale leather slippers</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE - 8.3.3
RICE MONOCROPPING - PERCEIVING CONSTRAINTS - CHENGICHERLA

Rice farmers' reality

The modernization of agriculture, with use of pesticides, monocropping, cash cropping, related to incentives, loans, credit facilities for pesticides, fertilizers, market trade and middleman, is apparently viewed in a mixed way:

- Borewells are drying up
- Water tables are low
- Agricultural labour is not assured
- Barter wage and contractual labour are expensive
- Crop benefits are minimal
- Loss of soil fertility
- Market forces have 'flux' and uncertainty
- Long dry seasons are present
- Greater dependency on money lenders
- Lack of access to water, makes them leave their own land fallow and labour on irrigated lands of others.
- Multivarient livelihood options with rural and urban elements (second employment in trade and business).
- Non availability of labour for large farmers.
- Feudal history of landlords, moneylenders and jagirdars (inabsentia landlords), though abolished, still reflects in their social relationships.

With the shift from mixed, traditional dry crops in 1960s to monocropping, for market, payment of wages in kind of cash, has indirectly aggravated the food security of the marginalised, so that they even buy fuel mixes, vegetables from the market. These were, in earlier times, easily available locally.

Factors Determining Labour Work

- Agricultural season (kharif predominately)
- Cropping pattern (rice, floriculture, mixed vegetables, tomato)
- Land irrigation potential (availability access to water)
- Classes of the communities (mostly as a continuation of the feudal lineage, as well as mixed migrants)
- The background of the household (with rural and urban elements)
- Off farm opportunities (sand brick quarrying, masonry work, basket weaving, toddy selling)

Women's Adjustments to Environmental Changes, is by

- Fuel mixes
- Women co-operatives in labour (assisted by NGO's)
- Dual livelihood options (JFM and rice monocropping)
uncertain rains, decline in soil fertility, land conversions, and opportunistic cropping (rice and fodder grass). Milk vending/hawking, fodder-purchase/sale, and several entrepreneur options (such as middlemen in liquor-trade, fertilizer supply, land-selling, brokerage, household, tailoring) with all members in the household, contributing towards the accumulated strategy for survival (Baker 1995) is a reality. Thus, it is perceived that interactions between different enterprises within the same household exists, towards subsistence security. (Bayer and Ann waters-Bayer 1991). Flexible, internal division and pattern of labour use is itself, an adaptive institutional mechanism (Sinha 1996) and a surrogative indicator!

**TABLE - 8.3.2**

*Pastoral-Peasantism: Modes of Subsistence Security under CDR*

*Rice-Farming systems in Chengicherla*

<table>
<thead>
<tr>
<th>Participatory lead-questions</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Do you grow forage crops?</td>
<td>-</td>
</tr>
<tr>
<td>* How is the animal stock size-Large or small?</td>
<td>Small</td>
</tr>
<tr>
<td>* Are they interactions within arable small holding?</td>
<td>+</td>
</tr>
<tr>
<td>* Are there evidences for opportunistic cropping for grain and stover? (Dry Fodder ‘Sorghum’ in isolated patches or from fallows)</td>
<td>+</td>
</tr>
<tr>
<td>* Do the Farmers stock manures?</td>
<td>+</td>
</tr>
<tr>
<td>* Is there spatial proximity between the pastoral Peasants and larger Goud Farmers?</td>
<td>+</td>
</tr>
<tr>
<td>* Grazing from fallow-lands could exist (facilitating complementary land-use)</td>
<td>+</td>
</tr>
<tr>
<td>* Are there improved relations with farmers after crop-harvest (need-based manure linkages is perceived)</td>
<td>+</td>
</tr>
</tbody>
</table>

The options at the peri-urban interface for peasant pastoralism as viability, as a followup in vocational training might be in the following areas -

* Tree-Goat based integrated small Farming
* Training in para-veterenary services (vocational)
* Training and education in ‘organic amendments’ of the degraded soils
* Goat and Sheep stocking and rearing/penning
* Fodder bank linked-multipurpose tree patches, with allowance towards ‘cut and carry’ facilities
* Improved cultivation-options of forage-legumes, dual purpose crops for grain and fodder; Traditional Fodder Trees (Bayer and Ann Water Bayer 1991). The above may possibly be interventions to improve the fallow ‘cropping’ in the context of subsistence security of their livelihoods.

The gaps and insights from pastoral-peasant communities:

Can follow-ups be done?

Frankly, the pastoralists feel that—they have been heard, in such instances of interactive sessions, but are skeptic, because no solutions are forthcoming, to their problems.

Their interests, in the discontinous ‘oral-testimony’ informal sessions in the field as well at their homes, revealed that.

* They are interested to have a choice of their group representative in all matters.

* External initiatives, such as the present study, can assist as a ‘linker’ between the group representative and the concerned people/Department in the government (an older pastoralist narrated this view).

Personal sharings and small beginnings:

Despite restrictions of time, commitment and contact with the pastoralists in the study, perhaps the strong points are the faith of sharing, concentrated talking to the target groups which is rewarding (Scholte et al 1996). Personal sharing in Chengicherla, had been into multi-issues of their needs such as Health-eye care and medical assistance, a part-time assurance for a job to the younger pastoral-peasant youth or helping the children in night-studies and advising on educational options and opportunities in the city.pastoral societies have complex objectives,due to constant disequilibrium(Reckers 1997).The learnings were - their shifting interests and priorities towards urbanisation.

The researcher, as a Faculty of the Vocational Teaching programme,in Loyola Academy College, feels the ‘humanistic approach’ to their accumulated strategies and perceived needs be addressed as:
• Capacity building – organisation of Eye-camp, under the banner of NGO, the vocational college and city entrepreneurs, in the village.

• Seeking out vocational short term training cum teaching opportunities, for self-help-NGO supported livelihoods (not employment per se) to the ‘target-groups’.

• A fortnightly-visit to the village for a voluntary educational assistance, on an sustained basis along with the s(not employment per se) to the ‘target-group’.

• A fortnightly-visit to the village for a voluntary educational assistance, on an sustained basis along with the graduate students of the college.

Listening for a change

The researcher recognises that in many situations of PRA with pastoralists, the working methods was ‘mutual trust and triangulation’, reinforced by the NGO-insider. This facilitated ‘listening’ by oral-testimony, with a human ecology perspective, than strictly maps, diagrams or matrix. The latter, were the analytical constructs worked together, with NGO-insiders and the pastoralists, to evolve, questions to understand their livelihoods. The social units than territorial units had specified the dynamics of institutional issues rather than conventional technical ones.

Evaluations of ‘state of livelihood’, local capacities and understanding issues, with: pastoralists, thus is seemingly by ‘sharing of human experiences’, by ‘analysis of difference’ between the social groups, informally. The process continuum remains and much need be done, for complexities and uncertainties in their marginalised livelihoods remain. The present investigation is apparently the first initiatives, into their livelihoods.
UNSUSTAINABILITY IN THE FRAGILE RICE-MONOCROPING ± LIVESTOCK COMMUNITIES IN THE PERI-URBAN LANDSCAPE

(A) The Physical context (first-order characteristics)

Small marginal livelihoods, focussed on farm-household rice monocropping, (as part time farming), feel isolated from main-stream green revolution farmers, because of poor-communication skills, limited mobility of women and youth. The socio-cultural context of Chengicherla village as a peri-urban village, with an accessible National Highway, trade center and an adjoining local railway station is seen as a debatable issue, because despite the opportunity of a networking access, the economic implications of the livelihoods are in (i) wage labour in rice monocropping (ii) peri-urban interface labour and trade (iii) Wage labour in Joint Forest Management. The dwindling fertility of the landscape in rice monocropping (historically, brick-making was an occupation), the lack of interest in farming by in absentia farmers, due to non-availability of contractual labourers, the options for a premium on urban -land sell-outs, uncertainty of rainfall and water as a constraints are in unison, towards 'Inaccessibility' of the resource-base. In a sense, the farmers feel that it is a closed-system, with no room for improvisation.

Fragility complements inaccessibility and marginality and is assessed with reference to its usage pattern (Jodha 1995). As implied, the soils are dry, with lowered water-tables, and lowered regeneration capacity Since the last two decades, farmers conventionally use the rice varieties, suitable for the zone and find their lands are unproductive in terms of yield and accept the limitations of rice monocropping and are helpless too.

The vulnerability factors of economic - life support systems of communities, play an important role in the usage pattern of the natural endowments (rice monocropping,small livestock ± pastoralism) as evident from their rationale, in the Table. 8.3.4 & Table 8.3.5
<table>
<thead>
<tr>
<th>Fragility of Resource base</th>
<th>Participatory responses</th>
</tr>
</thead>
</table>
| • Low-input absorption capacity of the resource base                                       | • For subsistence economy, and labour 'barter'.  
• Yields and diversification have not increased in the last two decades  
• Despite application of organic manure (hen’s manure; goat manure, on fallow lands), no yield gains are evident in rice  
• Previous cropping history of rice with close planting continues  
• In certain instances, fallow and revival of rice cultivation on brick- kilned landscape is done  
• Comparative biochemical-external subsidisation of inputs, is an increasing trend in Chengicherla |
| • Inequities                                                                              | • Inter-generational inequities exist, with the decline of traditional dry Farming (1960-70’s) now  
• Current inter-generational issues are focussed on land mortaging/sellouts vs fallow lands vs subsistence rice monocropping vs rice to fodder grass shifts |
| • Range and quality of dependable productivity and consumption options                      | • Limited to traditional rice varieties (BPT and 'Hamsa')  
• Cultivated for subsistence economy, due to varied factors (part-time farming; lack of labour and dwindling water resources) |
| • Intensification                                                                         | • Constrained and 'priorities' are varied among the small farming communities |
| • Newer developmental interventions                                                       | • Urban-land mortage/sellout  
• New 'Hyderabad Metropolitan Status', - with increased 'Premium' on land as a commodity. |
| • Major shocks                                                                            | • Dwindling water tables  
• Developmental enigma, under the surrounding industrial belt (possible off-site impacts) |
| • Level of subsistence, due to Rice Farming ±Livestock and Pastoralism                     | • 'Low' (Livestocks are an 'insurance' premium under stress and drought) |
| • Resource degradation status                                                             | • Already under-way (Fallow lands,- in absentia farming) and due to rice monocropping coupled with partial land sellcrops - deagriculturisation |
PLATE III

PASTORALISTS – PARTICIPATORY APPRAISAL, LKMS
- CHENGICHERLA
PLATE IV

AGRICULTURE WAGE LABOURING IN RICE
MONOCROPPING - CHENGICHERLA
Fragility of livelihoods, is not purely a biophysical one, but is relative to human-use context. The rapid degradation of the parcel of land in rice-monocropping (neglect, loss of interest, fragility, lack of water and labour force, more so due to no sustained returns) and human interventions are complex, varied and uncertain) are the determining trends, in the situation-context.

Fragility, in the human – use context (coping with stress, drought and uncertainty) restricts production and intensification of rice-monocropping or any innovations due to (a) shifts towards alternative options in the peri-urban edge (b) breakdown of the ‘systems-integrity’ of the terrain- by over-use, close planting, no traditional – innovative farming by the neo-farmers.

The above is again linked to ‘marginality’ where small rice-farming communities, are not the main-stream GR agriculture, due to lack of interest in the low endowments of the fragile resource-base. The physical resources, on which they cultivate are under ‘Manyam lands’ (temple or religious endowments, which they cannot sell), small undulating lands with fallows (enriched with Parthenium weed, Prosopsis – shrub-fodder and lack of additional endowments of water-sources, forest-trees). The logistics of cost/reduction opportunities, in rice cultivation, lack of interest in conventional measures of enhancing productivity (in absentia and contractual farming is the norm), no fit with trade or exchange with main stream economics, are factors which are reducing the farmers’ capacity to undertake rice-farming seriously. The scarcity of water-availability (it is more an issue of power supply to run the motors, erratic power – fluctuations; due to adaptations of the inter generation farmers, into liquor trade; land mortgage and conversions; urban opportunities in small-time trade and contractual jobs, have contributed to neglect, of the diversity or heterogeneity of small farm-lands.

**(B) Human responses/adaptations to the first order characteristics**

The ‘niche’ products/activities, having comparative advantage, in the ‘situation-context’ are

* Retention of ‘part-time rice-farming’ as a subsistence-food-base (despite the above limitations)

* Parallel sellout/mortage/modification of the resource base (land conversion to a merchandise) and let-out for petty shopping/business (rentals with a premium amount as security)
THE INSIDERS' RATIONALE TOWARDS RESOURCE USE INTENSIFICATION AND HIGH PRODUCTIVITY - CHENGICHERLA
(A MIXED OPTION)

| **Rice monocropping** | Subsistence small acreage and part time farming is a continued facet in the livelihoods, parallel to options of a small-part land sellout or mortgage for renting towards business shop-outlets.  
* Milk vending is perceived as having an 'Urban' market and prioritised as a livelihood. |
| **Small Livestock Herding at homes** | Livestock keeping and milk vending is the life line of new entrepreneur farmers, which need be intensified.  
* Sheep/Goat keeping could possibly step-up, due to economic returns and if sustained by opportunities of interactions (Joint Forest Management initiated)  
* Sheep/goat are 'insurance factors in livelihoods  
* Younger generation youth, seek opportunities, but are helpless due to focus on ‘daily’ livestock and milk vending, dynamics on the peri-urban edge |
| **Pastoralism** | Last generation is in Pastoralism  
* Evidences of conflicts with ‘Goud’ farmers is accrued, historically  
* Short term ‘adaptive mechanisms’ for water points, passage along farms, fallow- fodder access is prevalent by negotiation / barter  
* Cannot perceive ‘integrative-livelihoods’ of mixed farming, despite realization of traditional pastoral linkages and local knowledge management systems. (The rationale of traditions in Chengicherla) |
• Conversions/Transitions of cultivation – with Rice farming, fodder-banks (for livestock) and partial urbanization (constructing homes for rental purposes)

• Intensification of ‘Milk-flows’ to the neo-peri-urban colonies and local secondary market trade centers, as a part of the ‘commodity-chain’ contributing to urban - milk flow to large traders.

• Parallel, step up towards contracting for fodder-grass (Kancha) of the JFM programme and networking for newer trade options (in pasture and milk based livelihoods) The locals, perceive that interventions are needed, at this phase, for infrastructure (storage capacities), finance (diversification of livelihoods) and technology (linking pasture – live stock ± sheep vocational training)

Human adaptation mechanisms

Transhuman opportunities (seasonally and spatially) in the region, with rural-urban straddle’s is prioritized, by the local community.

The constraints of traditional rice-growing, parallel to the fragile, low soil endowments, have enabled them to seek out adaptable strategies such as

• A need – felt for post harvest storage facilities for rice (an immediate necessity) prioritised by the rice growing communities.

• Newer options into commercial dry land horticultural crops (gauva) Tree-nurseries (Teak), legume – crops, medicinal and aromatic grasses.

• Predominantly, the majority of rice-monocropping, local farmers perceive the ‘premium’ of the land-price, for urban-conversions, as an opportunity to bank on, due to urban – edge effects.

• Women are readily recognizable as the labour-force from rice-monocropping, to urban-household maid servants – which is a reality (improved wage earnings than traditional rice-labour payments) under conditions of housing and urbanization.

The Maximization of human adaptation mechanisms is thus evident. The above, are the trends of unsustainability, in the context of fragile resource characteristics (first and second order characteristics) which determine the ‘institutional’ framework and the ‘dynamics’ of entitlement mapping, in the context of the case study.
'RICE MONOCROPPING ± LIVESTOCK PRODUCTION' 
AT CHENGICHERLA

(Disaggregated entitlement mapping processes)

Rice monocropping ± Livestock rearing ± Peasant Pastoralism

Micro
- Ownership rights
- 'Manyam'lands (temple lands)
- Inhabentia farming
- Tenant farming
- Customary rights and caste
- Tenurial rights
- Kin networks
- Informal networks
- Conflict resolution
  (Newer adjustments)

Meso
- Access to resources: seeds, fertilizers
- New partners
- NGO-fodder-JFM initiatives

Micro
- Marketability of produce (economics)
- Commodification
- Access to labour + Breakaway forces in urban opportunities
- Social forms and reciprocability
  (barter arrangements)
- Intra-household dynamics
- Multivariant fodder-fuel, toddy and food flows
- Energetics of work and gender division of labour
- NGO initiatives on wage labour
- Barter relations with labour pastoralists in JFM

Micro
- Part-time farming
- Diversified livelihoods
- Multivariant flows
- Gender in JFM as secondline beneficiaries
- Fuzzy entitlements (a) CPR for Peasant pastoralism
  b) Rural-urban transitions
- Land sellouts and micro-polities + adjustments
- Rural-urban networking for milk, fodder and labour and brokerage.

Fig. 8.3.2
UNSUSTAINABILITY - THE BIOPHYSICAL CHARACTERISTICS IN CHENGICHERLA

INACCESSIBILITY

* Timely availability of seeds, and advice is still difficult.
* Labour diversification into urban towns, and JFM have made access to daily wage labour difficult, for the larger rice contractors.
* Subsistence, small area rice monocropping, is isolated from Green Revolution farmers, because of complex limitations in human and natural resources.
* The present generation farming are in the last line of rice monocropping since the practise of dry-land agriculture (1960's) in Chengicherla
  * Traditionally, we have been branded as wage-labourers and marginal farmers, under the feudal zamindari system of the Nizam.
  * Again, due to 'misappropriation' of lands by the Gouds, we are marginalized from main-stream farming.
  * Despite being accessible to the National Highway 7 (3 kms) and railways (3 Kms), we are 'mixed' and feel 'semi-closed' due to lack of infrastructure development here
  * Other villages around have developed, we are stuck with joint forest management

-Local residents

Fragility

* Rapid degradation of brick-kilned landscape
* No surplus generation from rice monocropping of traditional varieties
* Cost of inputs on the rise(Fertilizers, pesticides)
* Non-availability of water (dwindling water table, erratic power supply)
* Manyam (temple) lands, in-absentia farming and fallows, contractual farming for subsistence rice cultivation and low lying terrain are obstacles to infrastructure development
* Under investment, due to constant fallows and weeds

Marginality

* Low productivity, small scale and risky production on marginal, undulating and patch landscapes
* Inability of people to opt for high option production due to resource fragility
Diversity

* There exists heterogeneity of work force in peri urban fringe (Rural-urban straddlers). This is apparently an issue to seek, towards adaptations.
* No option for Rice diversification due to fragility and marginality

Niche options

* Opportunities in sheep farming, is prioritized by Joint Forest Management initiatives
* Fodder banks are prioritized for community initiatives, by cut and carry basis
* Small jobs as urban maid-servants, for higher monetary returns and quality of life is in the emerging peri-urban landscape.

Traditional adaptations:
The LKMS of pastoral - peasantry ‘rationale’ (oral testimony) is a lost or last opportunity!

Human adaptations and Niche products/activities
* Retention of part-time rice monocropping ± Livestock insurance as a subsistence food based, livelihood, as well as rural urban straddlers in the informal economy of daily survival.

* Parallel sellouts/Mortgage/modifications/let out of the land partially for petty shopping / business with premium as security (a monetary safety net is is accrued)

* Conversions/Transitions of cultivated lands to fodder banks, or partial urbanization (homes for rentals) and with fallows for commodification.

* Intensification and commodification of ‘Flows’: Milk sell-outs to neo-peri-urban neighboring colonies, secondary market nodes, and large traders
* Contracting fodder grass (Kancha) from JFM, parallel networking towards pasture grass and milk – sellouts.
* Needs prioritized: 1 Storage facilities for Rice harvesting
  2 Finance – for diversification of livelihoods
  3 Vocational Training – pasture – livestock management
**TABLE - 8.3.6**

**WELL-BEING RANKING OF PEASANT - PASTORALISTS**

<table>
<thead>
<tr>
<th>ISSUES</th>
<th>RANKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children need to go to school, to be educated convent schools and high school education is a must</td>
<td>1</td>
</tr>
<tr>
<td>Employment which is stable and enduraring is a need for atleast a number of house hold</td>
<td>2</td>
</tr>
<tr>
<td>Assured, Job security for the next-generation youth</td>
<td>3</td>
</tr>
<tr>
<td>The health status of the individual and family members</td>
<td>4</td>
</tr>
<tr>
<td>Need of social support, for their livelihood endeveours is felt</td>
<td>5</td>
</tr>
<tr>
<td>Seeking towards a high premium from land sellouts in the peri-urban edge as a bonus for their furture</td>
<td>6</td>
</tr>
</tbody>
</table>

**THE RURAL-URBAN INTERFACE AND THE MICRO POLITICS OF LAND CONVERSIONS**

The peasant pastoral communities perceive and experience great diversity of interactions, at the local level itself. This is a consequence of historical, political, sociocultural and ecological as well as economic differences (Tacoli 1998b).

The rural-urban ‘straddlers’ commute to the local market (Uppal) for milk & Fodder sale and towards Pratapsingaram (the fodder belt.) for fodder purchase.

Given the situations, that households are multispatial (Tacoli 1998), cattle and land are important ‘Safety nets’ in the face of uncertainties of urban (transitional peri-urban) life (Krugner 1998), There are various strategies, perceived, by participatory modes, indicating, flow of goods and livelihood channels, whose directions are far more complex (Kamete 1998).

The newer, young entrepreneur farmers are into milk vending (services), speculative real-estate brokerage as small agents, de-agrarianization- by setting parallel-informal local chit funds (money-revolving schemes) Negotiating kancha ‘grass’ fodder transport and sell outs, migrating into non formal manufacturing and services sectors of daily wage employment (in the surrounding industrial belts); labour-force in newer urban agriculture initiative within the rural sector (at Agape center, in Chengicherla – men and women in wage agricultural labour and ‘Agro-forestry initiatives, toddy tapping and hawking’ and self-financed slipper-making entrepreneurship)
TABLE - 8.3.7

THE MESSY MATRIX
(The Difference, Distribution and Dynamic Matrix)

**RICE MONOCROPPING ≠ LIVESTOCK COMMUNITIES - CHENGICHERLA VILLAGE**

<table>
<thead>
<tr>
<th>The NGO perceives it as</th>
<th>The local, traditional families perceive it as</th>
</tr>
</thead>
<tbody>
<tr>
<td>A hindrance to labour shortage for gender work in JFM.</td>
<td>Traditional farming, maintaining by agricultural labour and women headed households.</td>
</tr>
<tr>
<td>Livestock communities as essential component of the local landscape.</td>
<td>Rice monocropping, part time farming which cannot be diversified.</td>
</tr>
<tr>
<td>An opportunity to leverage for labour improvement wages.</td>
<td>Next generation will not go into farming because of economics and no interests towards hard labour.</td>
</tr>
<tr>
<td>Newer initiatives, for JFM empowerment.</td>
<td>New migrant labourers vs locals in wage labour (conflicts)</td>
</tr>
<tr>
<td>A model agroforestry and fodder initiative can be started in the JFM patch itself.</td>
<td>Post-feudal-zamindari-land grabbing, by large farmers (Gouds)- an apparent inhibition.</td>
</tr>
<tr>
<td>Tree nursery can be a source of initiation.</td>
<td>The isolation attitude, towards newer initiatives, a need felt gap for interventions and economic fixatives of short-term gains.</td>
</tr>
<tr>
<td>We can diversify by agro forestry.</td>
<td>A new entrepreneur buyer views it as</td>
</tr>
<tr>
<td>Investment in wage labour has a risk factor due to economics.</td>
<td>A transitional landscape.</td>
</tr>
<tr>
<td>NGO initiated changes in wage labour, as well as JFM initiatives with women as an apparent conflict situation.</td>
<td>Land suitable for dry Horticulture and plantation crops (Teak, Gauva) and for tree nursery.</td>
</tr>
<tr>
<td><strong>The elder pastoral peasants see it as</strong></td>
<td>Commercial plantations for urban industrial users.</td>
</tr>
<tr>
<td>Dwindling occupation.</td>
<td><strong>The Large Goud farmers perceive it as</strong></td>
</tr>
<tr>
<td>Conflicts towards pastoralism and peasant rice agriculture.</td>
<td>Long term asset.</td>
</tr>
<tr>
<td>Urban-plotting and newer entrants (Commercial Dairy Forestry, Urbanization) may limit the future of rice monocropping.</td>
<td>Rice monopoly farming due to available labour.</td>
</tr>
<tr>
<td>Slaughter house, a newer initiative to goat/sheep rearing and disposal of sick animals as well as employment due to local lineages.</td>
<td>Mixed endeveour with rice and livestock and toddy tapping.</td>
</tr>
<tr>
<td><strong>Contd...</strong></td>
<td>With more interest in Rice storage structures and money lending and interested in plant protection hints.</td>
</tr>
</tbody>
</table>
### The younger generation of pastoral peasants, as a livelihood perceive it as

- A mix of Rice and fodder patch.
- Recognise the land patch as ‘manyam’ (temple endowment) land which they cannot sell.
- Predominantly mixed rice growing (straw) and fodder patches and cattle (Dairy) enterprise.
- Livestock (Dairy) and fodder is the main stay in peri-urban landscape due to market and newer urban settlers as catchments for milk and small vegetables and labour force.
- Agroforestry is not viable in the village.

### The sarpanch and village headperson views it as

- A traditional practice.
- A continued tradition of rice growing.
- Few ‘inabsentia’ farmers however sell the rice monocropping fields
- Due to fallowing and extreme water deficit, conversion to turn to urban plotting with retention of small patch for subsistence marginal farming

### The local women view it as

- Part time wage labour.
- An asset to modify for urban needs for small vegetables.
- An asset for future sell out.
- An asset for diary enterprise due to fodder link and rice for subsistence.

### The part time farmers (locals) view it as

- An asset, for the future
- Woman-based secondary source of income (Rice cultivation)
- Interests in partial selling, at a premium
- Diversification, with commercial, non labour Horticulture (Gauva, Teak, Mango)
- Breakaway due to labour diversifications on a day to day basis.

### The migrant agricultural labourers view it as

- Opportunity towards a dual livelihood (temporal/spacial wage time in rice monocropping and kancha grass cutting)
- Male in contractual labour on land and barter
- Women in temporary daily wage labour
- In-absentia contractual farming a boon and obligations/barter with hand loans, clothes, rice harvest and contingency loans for children education.

### The new settler views it as

- A continuing occupation for large farmers and those with ‘manyam’ lands
- Lands with new settlers can reestablish with rice monocropping
- Reclamation with agro forestry is a good viable option, commercially.
### TABLE - 8.3.8.

**THE INSTITUTIONAL MATRIX FOR RICE  ± LIVESTOCK FARMING-CHENGICHERLA VILLAGE**

<table>
<thead>
<tr>
<th>Micro-</th>
<th>Meso-</th>
<th>Macro-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENDOWMENT MAPPING</strong></td>
<td>Informal networking in</td>
<td><em>Megacity expansion opportunities</em></td>
</tr>
<tr>
<td>- Ownership rights</td>
<td>- Politics of land conversions</td>
<td></td>
</tr>
<tr>
<td>- Tenurial rights</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Customary rights &amp; castes</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Feudal-legacy</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Informal Networks</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Kin networks</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Access to water and labour</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
<tr>
<td>- Barter relationships</td>
<td>- Peri-urban 'niche' adaptations and opportunities</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ENTITLEMENTS MAPPING</strong></th>
<th><em>Possibilities, Outcome, Utilities, which arises</em></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Barter relationships</td>
<td>- Wage rights and regulations</td>
<td></td>
</tr>
<tr>
<td>- Gender division of Labour</td>
<td>(Rural Vs Urban)</td>
<td></td>
</tr>
<tr>
<td>- Intra Generation division of labour</td>
<td>(Wage labour Vs JFM labour)</td>
<td></td>
</tr>
<tr>
<td>- Share cropping <em>(Palu)</em></td>
<td>- Dual- livelihoods</td>
<td></td>
</tr>
<tr>
<td>- Inabsentia farming</td>
<td>- Informal shadow economy of urban earning</td>
<td></td>
</tr>
<tr>
<td>- Insider-outsider dynamics</td>
<td>- Informal shadow economy of urban earning</td>
<td></td>
</tr>
<tr>
<td>- Women's group-NGO led and JFM labour</td>
<td>- Informal shadow economy of urban earning</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>SOCIAL ACTORS AND CAPABILITIES</strong></th>
<th><em>Megacity expansion opportunities</em></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>- Rural-urban interactions (and niche adaptations and opportunities)</td>
<td>- Megacity expansion opportunities</td>
<td></td>
</tr>
<tr>
<td>- Urbanization of rural landscape initiatives</td>
<td>- Megacity expansion opportunities</td>
<td></td>
</tr>
<tr>
<td>- Peri-urban networking</td>
<td>- Megacity expansion opportunities</td>
<td></td>
</tr>
<tr>
<td>- Part time farming and urban jobs/contracts (Partnership with NGO and JFM)</td>
<td>- Megacity expansion opportunities</td>
<td></td>
</tr>
<tr>
<td><em>Vana raka samarakshasana samithi membership(VSS)</em></td>
<td>- Megacity expansion opportunities</td>
<td></td>
</tr>
</tbody>
</table>
TABLE 6.3.9
Determinants and associated Indicators of peri-urban Vulnerability and well-being at different levels in Chengicherla village

<table>
<thead>
<tr>
<th>INDIVIDUAL LEVEL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access to adequate nutrition and health care, primary health care.</strong></td>
<td>• Once a week, dispensing in the village by a government doctor</td>
</tr>
<tr>
<td></td>
<td>• Limitations are availability of target-groups, because vulnerability or coping strategies to livelihoods is prioritised.</td>
</tr>
<tr>
<td><strong>Access to adequate education</strong></td>
<td>• Presently, children are sent to government schools (primary) whereas middle school (at Uppal trade centre) access is not affordable by all.</td>
</tr>
<tr>
<td><strong>Access to adequate income</strong></td>
<td>• Income as cash, is uncertain and on a day-to-day basis, since the menfolk are into diverse survival strategies on 'informal sector' granite/sand quarrying, contract outwork, urban labour work of any kind.</td>
</tr>
<tr>
<td>II</td>
<td>• 'Women' are dependent on 'kancha grass cutting' and 'rehabilitation' labour and 'wage labour' in rice monocropping (seasonally) (there could be entitlement failures, coping strategies with drought, risk and uncertainties)</td>
</tr>
<tr>
<td></td>
<td>• 'Menfolk in diverse' labour force - contractual or daily work-labour in surrounding industrial belts, part-time farming of rice, vending and hawking of milk, country toddy, CPR access towards clothes washing, share rearing of livestock for large Farmers, with occasional 'middlemen' in mortgaging/selling transactions, Pastoralists/pastoral - peasants, into barter/trade opportunities, within/peri-urban fringe on cattle sale/organic manures. : Diversification of income at home with tailoring, meat sale and soft loan sanctions by pledging of jewels, assets seeking social funding (monetary, for contingencies like marriage, death, children's education) as well as adjustments (of previous loans, by informal networks)</td>
</tr>
<tr>
<td><strong>Access to credit</strong></td>
<td>• Patronage of labour contract, by rice monocropping large farmers by kind, barter, advanced monetary income, and under contingency situations</td>
</tr>
</tbody>
</table>

*contd...*
**HOUSEHOLD LEVEL**

<table>
<thead>
<tr>
<th>Household type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household type I</td>
<td>One room, non-plastered make shift brick room, with half-built doors, or else make-shift tarpaulin tents or thatched room. Members in productive work, varied, with husband in urban access to daily work (basket weaving, toddy tapping, masonry and relief work), wife and children, womenfolk (predominantly in manifold chores of cooking with fuel-mixes, access to water), fuel—gathering is by shared household / neighbours. Women in dual livelihood, temporal strategies (rice cultivation / post- harvest operations and community forestry works)</td>
</tr>
<tr>
<td>Household Type II</td>
<td>Cemented households, varied dimensions of kitchen ventilation / open hearth cooking, with adequate stock reserves of open Fuel wood / Dried co-dung and small animal stall feeding, straw heaps in front yard. Ownership of cycles (rare), sanitation (open access), water access by community bore pump by both the communities.</td>
</tr>
<tr>
<td>Household Type II (Local, Rice-monocropping residents)</td>
<td>Encroachment on marginal, communal open lands, nexus with political leaders and seeking out government subsidies on housing loans, plotting and added incentives of rations and newer gas connections for cooking. The capability and capacity of communities is invisibly expressed as time-based acceptance by locals as shared / available labour force for agricultural labour as well as contingency labour for grass-cutting to accrued lared stakes towards grass-auctioning and benefits of community forestry for the local residents. Currently, the implications of share of entitlements to the marginalized, migrant communities is open</td>
</tr>
</tbody>
</table>

**COMMUNITY LEVEL**

| Access to housing and community access to basic needs |
| Safety nets |

| Key: | I. Migrant Labourers  
II. Rice monocropping ± Livestock communities (Local) |
THE MESO-INSTITUTIONAL ECOLOGICAL SETTING:
A FRAME WORK FOR INSTITUTIONAL DYNAMICS
-CHENGICHERLA

Fig. 8.3.3
Occupational adjustments, towards income-earning re-orientation is evident. There is a transformation of the social identify, due to temporal and spatial variability in their accumulated strategies. These are strictly away from rice monocropping initiatives, given the limitations of fallow lands, lowered water tables, and reducing labour-force and the economics of rice cultivation. The 'well-being ranking' of the peasant pastoral communities well being ranking suggests to newer complex strategies in the direction of urbanisation.

**The Changing Landscape**

The perceptions of the 'edge', in Chengicherla as well as neighbouring 'rural' villages, is indicative of a patchwork of urban development (housing, residential business establishments) land sellouts and continuing agricultural production (rice-monocropping) with fallow-lands and open-access land (under dispute; due to illegal sellouts).

The notion, is vividly juxtaposed into their 'livelihood strategies, because-within the same house-hold, the urban-industrial economy' might co exist with agricultural production (Kelly 1998) as indicative in their participatory responses.

The blurring boundaries, with the expansions of the megacity is evidenced from surrogate indicators of:
- mushrooming of low-cost one room constructed housing, in the vicinity/within the village, on the edges, in most instances half built abandoned due to legal complications.
- a single-two-room standardized design complex constructed, with enclaves. to be let / sold, under 'Social-housing' schemes
- alternatively, the plot/land may remain idle, with cattle grazing on grassed-over rice fields, whose owners (sometimes in-absentia) await either developmental permits or more prosperous market conditions (Kelly 1998)

Discerning a pattern, is a way, to understand the relationships between the small towns and rural environments, in the context of interlocking livelihoods (Kamete 1998).

The insiders' perceptions of transience and social consequences of land conversions are as thus evident.

The conversion is frequently used as a means of circumventing agrarian reform, so that an opportunity for redistribution of rural income is lost (Kelly 1998). The peasant pastoralists perceive the back-lash of their old feudal land encroachment's by the 'Gouds' and further reinstate the newer deals of land conversions, in which, the stakeholders are 'invisible',
PLATE V

PERI – URBAN PLOTTING AND ABANDONED HOUSING - CHENGICHERLA
They find themselves, on a losing ground, because they lack tenacity rights, are dependent on agricultural worker wage labours, have little or no formal education for opportunities in the new urban-industrial economy and are experiencing 'dislocations' in terms of livelihood security.

Breaking FEN and Fuzzy entitlements – the genesis

Dwindling water tables, decline and plateau in rice productivity on undulating – brick kilned patches, the new efflux of opportunistic labour option in the cities and the 'invisible' reality of land conversions, have repercussions summarized as:

* Fuzzy 'entitlement mapping' in the peri-urban landscape
* Opportunistic, complex trade/barter relationships
* Invisible deals of coercion, corruption and persuasion towards 'processes' by which their own landholdings and endowments are exchanged/sold or held back for a time period.

The village head (sarpanch) and the large farmers perceptions - Development priorities, in contrast to CDR farming systems at Chengicherla.

"The land-sellouts and earlier contest ed land-scapes in Chengicherla, are open to 'persuasion' by middle-men, many situations are 'managed', disturbances compensations are illegally paid, with instances, where rezoning decisions, often involve bribery and kickbacks"

-Local insiders

* Municipal politicians, exert control over land conversion process, with real estate agents and brokers (the local farmers themselves)

* Parallel to all this, is the avoidance strategy (common in the socio-culture of the Nizam's lineage, evident in the day-to day living in Hyderabad city) of the land sellers, large farmers and the negotiators, as well as government officials because farming communities can claim the land as 'unproductive' and fallow and gain on waiver from taxes.

* People will not buy agricultural land here, unless there is a chance of having it converted. (the changing landscape picture!)
The New Urbanization 'elements'

Again, the bond between the families, (Gouds and in-absentia Reddy farmers) and the peasant-pastoralism communities dates back in time, to several generations, which forces them to adapt to change, so as to avoid conflict, forcing in terms of the legal rights and souring personal relationships (Kelly 1998).

The farming communities and their, entitlement-exchanges, in terms of their livelihoods are caught into a 'transitional trap' and not strictly seen in terms of house-hold strategies, gender roles in decision making, daily flows of food-energy, but more into a hazy, but vividly constructed potrait of a transient type of urbanization in which 'rural' and 'urban' elements co-exist., in tension (Kelly 1998), as different priorities are played out.

The basis for 'entitlement failures' as well as the rationale of the insiders, for 'disaggregated entitlement mapping', on a process-continuum (non-equilibrium ecology) is vividly captured in the 'messy Human-ecology matrix.' This in turn, has lead to the deciphering of the social institutions and the structuration of the landscape. Thus there is the shifting focus into institutions per se as the major factors in the approaches to CBSD.

The Local 'realities' to land conversions:

"We feel happy to sell out the tenacity rights, due to the marginal profitability of rice cultivation's and the negative trends of water availability, and labour access. Moreso, my children will not be in farming. Education and urban opportunities are my priorities. They should not be like me. Times have changed."

-Local rice farmers

The village Sarpanch, perceives that Chengicherla is caught in the downwards spiral of conservation 'due to the forest track', and further reinstates the new trends of urbanization and de-agriculturization as evident from other insiders-

The village patwari's refusal to show the land records is indicative of complexities of land-grabbing in the past....

The school teachers response to initial 'surveys' for ecological investigations, pertinent in this context as.... 'What would you get from all this? Things really don't change in terms of food and energy. Several census have been done by me.'

The social realities of 'difference, dynamics' apparently with multitude dimensions of changing landscape at one end, JFM initiatives and breakdown of rice monocropping, juxtaposed, under collapsing frames, sets the landscape, into non-equilibrium ecology.
CASE STUDY #2 JOINT FOREST MANAGEMENT AND LIVELIHOODS

Introduction

The Joint Forest Management (JFM) is a state rehabilitation programme, initiated in the early 1990s, at the Chengicherla village. The M.V. Ranga Foundation, an NGO, has been in the process of capacity building, as a women’s group since 1980s and focussed as a strong link between women-livelihood (as wage labour) and the JFM programme. (The case study has evolved parallel, to the research investigation, as an entry during the late 1994-95, hence viewed as a continuum)

Historically, due to overexploitation and neglect of the pristine grasslands and the forest flora, since the 1960s (the aftermath of a feudal struggle against exploitation of the Telangana farmers, by outsiders in the region - the Telangana agitation), and its repercussions, the mixed deciduous, thorny scrub-jungle, degraded forest landscape has been fissured.

Conflicts in resource-use and perceptions, are apparently perceived from the multiple stakeholder analysis (Tab 8.3). The approach to the case study is through the participatory monitoring and evaluation (PM & E) mode, on a continuum, with the focus on 'current realities', as captured from the insiders' perceptions (oral testimony, rehabilitation dynamics, indicator species, LKMS of the village elders in terms of biodiversity of the degraded track) (Tables 8.3.15A-D, and Table 8.3.17)

The revegetation dynamics indicates patches which are good, degraded, with indicators of gap planting, the species diversity, the local name of the 'kancha' patch, the topography from the insiders-forest guard's perspective. (Fig. 8.3.4 and Fig.8.3.5)

The case study, is presented, in diverse frames, reflecting the varied viewpoints, as pieces of evidence, which are put back, to be analysed, in terms of sustainability elements, resources characteristics, keeping in view, the macro-, meso- and micro-institutional frameworks, in the context of the micro-realities, in the peri-urban landscape. (Fig. 8.3.7, Fig.8.3.8 and Table 8.3.19)
THE MESO INSTITUTIONAL FRAMEWORK

Joint forest Management (1992-1996):
The Joint Forest Management (JFM) is a program, of the State Forestry Department, with the basic objectives of

* Improvement in the protection and development of forests through peoples' participation.
* Improved biodiversity and wild life through networks of protected areas and ecodevelopment of the fringe villages
* People dependent on Forests are to the given an alternative source of income through Forestry – rehabilitation strategies and benefits accrued. The alternative employment need be sustained, on a long term basis.

The institutional priorities of State JFM –

* Decentralized Management
* Resource orientation
* Sustainability
* Multiple-products + Biodiversity
* Micro Planning
* Process orientation
* participatory decision making
* Facilitating people

* Peoples institutions
* Recognizing Diversity
* Multiple need boned objectives
* Site-specific Management
* Menu of options
* Experimental flexibility
* Low input management and regeneration
* Multiple species and multi-tier plantations

*PRA with forester, forest guards and NGO.

The State JFM policy has evolved through a parallel 'continuum' in line with the present investigation. The changing priorities, electoral representatives, sharing of the usufruct rights, inclusiveness of the private sector, incentives and newer policies towards local participation reflects the 'thrust focus' of JFM in the region.
The Structural framework for the JFM programme (1996) an adjunct to the State forestry Department, popularly termed as CM's JFM, is suggestive, of a favorable political climate, for JFM in the study region too.

**THE MACRO-INSTITUTIONAL PERSPECTIVE**

In the context of the study, newer government policies as initiatives, changing priorities of institutions are evident. The perspective, seeks to offer, as an opportunity to match or mismatch with the ground realities and the multiple stakeholders, in relation to case studies.

‘Janmabhoomi’ - Vision 2020

The Andhra Pradesh state Government has come out with a ‘Vision 2020’ document, which is envisaged as an instrument, with ‘Janmabhoomi’ (the motherland) as the spirit. “The new philosophy of development is holistic, with human beings at the core of concerns. Economic reforms would be meaningful only when development is shared and socially responsible” (Governor’s address, 16 February, 1999) to Assembly

Janmabhoomi, is a grass-root initiative, by the State government, which combines the principles of voluntarism, participation, transparency and accountability. It is operationalized through interactions and mobilizations in different phases and objectives. It is a unique model for integrated development of individuals and society and charts out the vision of the people.

The creation of Water-users associations, Water-shed development committees and Vana Samraksha samithis (VSS) – ‘community – Forestry People’s groups’ are prioritized.

Development of human resources, proper management of the natural resources and employment generation are all with ‘participation’ of the people.

The JFM policy of Andhra Pradesh state, its structural framework and multiple perceptions are integrated on an analysis grid which suggest diverse perceptions and changing strategies in the context of the issues (refer Tables 8.3.10 to 8.3.14)
The general body meetings, related to any initiatives need involve locals and should be at the village itself, was the norm.

**TABLE - 8.3.10**

**NGO and Joint Forest Management - The Genesis**

(Highlights of the issue)

| NGO initiatives in peoples’ capacity building | • Community - Development of waste lands, due to high erosion in the 1980s  
|                                               | • Targetted to Scheduled Caste (SC) community towards community lands for livelihood (early 1980s)  
|                                               | • Milch cattle - Bank loans, for SC women for livestock needs  
|                                               | • 1979, first initiative towards corporate Anjaneulu society towards saving and thrift  
|                                               | • Facilitated purchase, lease and labour on forest lands involving about 20 women and the NGO - every 3 months/year.  
|                                               | • Forestry department could visually perceive large-scale stoppage in grazing of the reserves.  
|                                               | • Forestry department were too involved in their own work and initially not interested, in the NGO initiatives to discuss  
|                                               | • The JFM initiatives, was apparently projected as a women’s group  
|                                               | • The general body meetings, related to any JFM initiatives need involve locals and should be at the village itself, was the norm.  

<table>
<thead>
<tr>
<th>The initial resistance of Forestry Department to JFM initiatives</th>
</tr>
</thead>
</table>
| • People decide on the community forestry initiatives  
| • Peoples’ dynamics are prioritized  
| • People develop their own potentials  
| • Forestry handles the rooster systems  
| • There should be no blue-print approach, by Forestry Department  
| • Women meetings were held, in several sessions, from once in 2-3 months (1987) to 3 - 4 times per month, along with Forestry representatives for discussions on the situations of  
| a) Incorporation of women’s needs, to regenerate forestry, (per.comm Dr. Santoor Singh IFS)  
| b) Knowledge of microclimate, soils of the Forest track  
| c) Forest lands as apparently theirs, due to Government (*patta*) land sanctions.  

<table>
<thead>
<tr>
<th>The convincing strategy of NGO with Forestry Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>The positive features at initiating phase of JFM, by NGO's</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Women had clarity on JFM and could foresee the strategy.</td>
</tr>
<tr>
<td>Forestry regeneration, by people</td>
</tr>
<tr>
<td>Women's unity, a common strength at Chengicherla</td>
</tr>
<tr>
<td>A Honest Forest Officer and committed Guard</td>
</tr>
<tr>
<td>Overcoming leadership by participation</td>
</tr>
<tr>
<td>Forestry Department views it as</td>
</tr>
<tr>
<td>How does the NGO view JFM as a Sustainable Development Strategy?</td>
</tr>
<tr>
<td>Forestry Department views it as</td>
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</table>
## TABLE - 8.3.11

**AN ANALYSIS MATRIX OF THE CHANGING JFM POLICIES**

*(Macro - Institutional Analysis)*

*Overview of the Joint Forest Management policy of Andhra Pradesh State.*

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>Adoption of National Forest policy</td>
</tr>
<tr>
<td>1990</td>
<td>First directives, towards Joint Forest management</td>
</tr>
</tbody>
</table>
| 1991 | Government order (GOMs 218, dt.28-08-1992)  
* Gram Panchayat president as member of management committee  
  (done away with in next GO)  
* 25% of reserved items earmarked for community; 75% for Forest Department (FD)  
* One third of revenue earned would be the share of the samithi. |
| 1993 | Government order (GOMs 224, dt11-11-1993)  
* Number of elected representatives in management committee increased from 10-15 (formerly 6-10)  
* Term of management committee 2 years (formerly one year)  
* NGOs as special invite included  
* Inclusion as ex officio member – VAO/VDO/Village teacher  
* Sharing of user rights – 50% set apart for self – consumption by community |

### The sector reform policy matrix of the Forest Department

*(GOMs 237, Nov 1993)*

**Forestry Administration (FA)**

* Forest reforms with suggested links to private sector and other agencies (Animal Husbandry, Horticultural, Tribal Development)  
* Manpower policy reforms, to be introduced *reward specialization, incentives to performance*, ensuring *stability of staff in specialized areas* (overcome frequent shifts in administrative norms)  
* *Staff training* for economic analysis, transparency of operations, change of measures of performance in terms of output of goods and services  
* NGO co-ordination committee and encouragement in planning and implementation of selected project activities  
* Extended farm forestry

Contd...
**Technology and Management**

- Seed procurement, handling, nursery and planning practices under specially designed programmes (Tissue culture)
- Research needs, integrated with urgent problems in the field
- New type working plans in the avenue

**Issues**

- *Forest working plans need to conform more closely to changing and often conflicting multiple demands and increasing rural participation.*
- Data base for the design and implementation of new type of working plans is not available.

**Effects**

- Old working plans are becoming increasingly irrelevant with growing discrepancies between plans prescriptions, actual results in the field and finances available.

**Proposed change**

- *Prepare working plan according to new needs and involving local participation*

**Proposed Action**

- Format for new type working plans will be developed. In doing so, planning tools such as MIS, GIS and PRA will be used. Forestry inventory will be carried out.
- Redefine protected areas (PAS) and allow local participation as well as create core and buffer areas
- Controlled introduction of exotic species, with research and guidelines
- Clear feeling to be in suitable areas, after study.

**Policies effecting local participation**

**Benefit sharing and NTFP**

- Clear cut benefit sharing arrangements will be worked out involving local beneficiaries and the NGOs. NTFP with most market potential will be identified and strategy for rationalizing production and marketing and specific rules for benefit sharing will be prepared.

**Land and Tree/usufruct ownership policies**

- Private sector intervention in seedling production will be encouraged after study. The FD in collaboration with wood based industries can take up block plantations in degraded forestland. It will engage in dialogue with private sector to invest in commercial forestry ventures.

*Contd....*
<table>
<thead>
<tr>
<th>1996 Government order 173, dt. 7-12-1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>* NGOs as members of the managing committee, but with no voting rights.</td>
</tr>
<tr>
<td>* VSSs would be entitled 100% share of timber and bamboo harvested, subject to deduction of harvesting costs</td>
</tr>
<tr>
<td>* Need for maintaining biodiversity while developing forests in VSS areas enunciated.</td>
</tr>
</tbody>
</table>

**A Structural Framework for Joint Forest Management**

**A P State & Telangana Region (1996)**

**Chief-ministers JFM programme** *(Vana samrakshna udayamum)*

* Forest protection movement, commonly termed as CM-JFM or Vana Samrakshna Udayamum
* Launched in February, 1996. Beginnings of a favourable political climate for community forestry
* Identification of fringe forest villages, for formation of VSSs under the programme
* 93% of the state forest area earmarked for treatment under CM-JFM
* Highest number of VSSs in the state, in the Telangana region, as well as highest grass area under VSSs (76% of Forest Area, under VSS in Telangana area and 1,60,000 Ha proposed)
* Andhra Pradesh Forestry Programme with 800 Vana Samrakshna samithis (VSS-peoples group) and Chief Minister’s Joint Forest Management programme with 380 VSS, totaling 1200 VSS programmes in the state.

* restrictions on transit of wood. The list of exempted species would be amended and procedure for issue of transit permits simplified.

**Pricing Policies.**

(i) Policy for removing seedling subsidy will be formulated and implemented.
(ii) Free grazing in Forestlands on analysis of impact of applying grazing charges, fodder programmes to be designed and incentives to stall feeding to be prescribed. Later on an action programme-a grazing policy that encourages natural regeneration will be formulated and introduced.

Policies affecting local participation in terms of (I) Benefit sharing arrangements to be specified (ii) Organization of production and marketing of MTPF (iii) Land and Tree/usufruct ownership policies. (iv) Pricing Policies are thus perceived from the above Meso institutional frame work.
TABLE - 8.3.12

MULTIPLE PERSPECTIVE OF JFM

'Down to Earth' magazine (CSE 1998) quotes

* 'Janmabhoomi' and the chief ministers initiatives are 'positive'
* labels 'Chandrababu Naidu' as a promising green minister in the late 1990s
* There is no strong feedback about peoples participation
* Bureaucrats are taking advantage of the gap.

Local Forester's perception

* The CM's programme is a political gimmick for vote catching

Local NGO's comments

* It is participatory, bottom-to-top, the trickle benefits cannot be reached, because of bureaucracy and corruption.
* The ideology is welcome, but the indifference to the programme is 'null' and 'segmented' response
* Politically biased villages are the models for such initiatives

The researcher's and villagers views

* Volunteers come in, along with students (force participation, with the educational institutions – students feel it as an outlet to monetary, while on commitment to the exercise, the response is low) and white wash compound walls, plant trees, make surveys and conduct awareness programmes... just like in any other government programmes, aimed at village development. Then what happens?"
* “It is a political motive, for vote catching and in our village, it is a poor response. People's livelihood is more important than programmes.”

The Government Policy Change and Follow up

* Promotions and transfers would be adorned on the performance of JFM programmes (for foresters and guards)
* Every 6-months remote survey renaissance of the JFM tracks would be undertaken (Source: The Hindu dt.16-3-1999)
### TABLE - 8.3.13

**THE MESSY MATRIX**  
(The Difference, Distribution and Dynamic Matrix)

**JOINT FOREST MANAGEMENT - CHENGICHERLA**

<table>
<thead>
<tr>
<th>The NGO perceives the programme</th>
<th>The marginalized (Women) understand it as</th>
<th>The large farmers and sarpanch view it</th>
</tr>
</thead>
<tbody>
<tr>
<td>* as a micro-watershed community forestry programme</td>
<td>* a basis for livelihood with women and ecodevelopment as a central issue, under fragile environments.</td>
<td>* as a development enigma, due to meso-institutional dynamics around the landscape</td>
</tr>
<tr>
<td>* as an evolutionary continuum from investment in women's capabilities, and capacity building to livelihoods</td>
<td></td>
<td>* however, with higher stakes, they have changing investments towards purchase on lease/auction the grass patches, for market (Grass auction and contractors)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The locals and the small farming community perceive the patch as a</th>
<th>The Foresty Department have the objective of</th>
<th>The menfolk in the village are interested in</th>
</tr>
</thead>
<tbody>
<tr>
<td>* legitimate right to access, historically more so, by the older people.</td>
<td>* rehabilitation of Degraded Forests with viable root stocks, gap planting, by pasture, and ecorestoration</td>
<td>* The revenue accrued and the gross economic stakes, as a take-off annually, in the mid-JFM phase</td>
</tr>
<tr>
<td><strong>The VSS members</strong></td>
<td></td>
<td>* A few are skeptical about transparency and accountability.</td>
</tr>
<tr>
<td>* Understand the profitability, transparency and benefit sharing mechanisms-including 'protection' initiatives due to usufruct benefits, MFP, Fodder, plantation, Grass auction and wages</td>
<td>* Transparency and capacity building</td>
<td></td>
</tr>
<tr>
<td></td>
<td>* Livelihood link to the village economy and employment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>The Village folks, question</th>
<th>The Pastoralists feel that</th>
<th>For new entrants as VSS members</th>
</tr>
</thead>
<tbody>
<tr>
<td>* The revenue land of JFM and the duration of the programme because, it's the Government Forestry track and they have no legal stakes on the land (belongs to the state and not the citizens and exclusion from access!) * The future implication of JFM</td>
<td>* a viable alternative option is being building up for them, with the fodder linkages and institutional financing</td>
<td>* they realise stakes are high, with dividends, more so, because rice monocropping is declining and there is difficulties of labour for agriculture.</td>
</tr>
<tr>
<td>Micro-</td>
<td>Meso-</td>
<td>Macro-</td>
</tr>
<tr>
<td>-------</td>
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<td>-------</td>
</tr>
<tr>
<td><strong>ENDOWMENT MAPPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* VSS membership</td>
<td>* NGO policy and framework</td>
<td>* World Bank assistance</td>
</tr>
<tr>
<td>* Customary rights</td>
<td></td>
<td>* Andhra Pradesh Forestry Policy</td>
</tr>
<tr>
<td>* Usufruct rights</td>
<td></td>
<td>* Chief-minister’s JFM programme</td>
</tr>
<tr>
<td>* Labour contribution</td>
<td></td>
<td>* Janmabhoomi-the state programme</td>
</tr>
<tr>
<td>* Patron-Client relations (Begar)</td>
<td></td>
<td></td>
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<tr>
<td>* Caste</td>
<td></td>
<td></td>
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<tr>
<td>* Work party and informal Labour work sanctions.</td>
<td></td>
<td></td>
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<tr>
<td><strong>ENTITLEMENTS MAPPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Gender division of Labour -access and arrangements</td>
<td>* Benefit-sharing under changing policies and newer economic incentives</td>
<td></td>
</tr>
<tr>
<td>* Vulnerability and fuzzy entitlements status of stakeholders</td>
<td>* Local elected representative</td>
<td></td>
</tr>
<tr>
<td>* de-facto control (Auctioning of ‘kancha’ grass patch)</td>
<td>* Newer partners (NABARD, NIRD, Private enterpreuners)</td>
<td></td>
</tr>
<tr>
<td>* local power politics</td>
<td></td>
<td></td>
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<tr>
<td>* Informal Networks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Co operative workgroups and dynamics</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CAPABILITY MAPPING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Resource-sharing networking and barter</td>
<td>* Transparency, accountability and empowerment.</td>
<td></td>
</tr>
<tr>
<td>* Patronage of acceptance of immigrants</td>
<td></td>
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</tr>
</tbody>
</table>
The JFM initiatives

The initiatives and motivation of the MV Ranga foundation, with Mrs. Shanti and Mrs. Esther Suhasini, towards the cooperative wage society was the preamble, for the forestry department to later pursue the JFM programme in Chengicherla.

The positive features of JFM at Chengicherla are the initiatives and motivations towards women capacity building, by the local NGO's with the focus on cooperative saving society. The coordination and pre-budgeting with an elected chairperson, by consensus, with transparency on economics, by the Forestry department. This had facilitated no middlemen in transactions.

Clarity and commitment towards immediate returns of minor forest produce sales, 100% from day one, of the revenue collected, to the VSS members.

* The negative features of JFM at inception, as perceived by the locals were the lack and non-clarity on issues related to the economics and transfer of the huge amount of money acceded from JFM.

The Gram Sabah (village grouping), conducted frequent meeting, with people; to enable them to understand the accounting and estimation procedure and thus the initial apprehension of economics of JFM was overcome. The confidence building by the elected chairperson the Forest officer (Vidyanagar) and the forest guard (Jaleel) with pivotal roles in communication to the marginalised and VSS members, was apparently the key towards initial acceptance of the JFM ‘in toto’

The Options Ahead (reflections of the forester)

The Forester reflects the following schemes, as an on going consultant with NABARD, NIRD for loan sanctions and feasibility with the JFM programme.

* Sheep rearing, dairy farm can be initiated in about 900 acres of the reserve forest with grasslands involving the local communities for an unit of 25 which could be constituted for a small catchment area. The JFM village development Fund in collaboration with NABARD, NIRD, initiated towards a sanctioned loan of RS 50,000 - 60,000 can be allotted to each group. (30 families)
* A more intensive, teak seeding planting can be further initiated, which can contribute to high revenue, in 4-5 years (started in 1995).

* Commercial nursery established in Chengicherla and neighbouring and village bamboo seedlings (3000-4000) planted in 1995, can fetch good revenue (each costs at Rs. 12/-) within 3-4 years.

> "Villagers cooperatives, in liaison with the NGO's and forestry department, can initiate an Eco-tourism spot, at Chengicherla, due to sanctioned green lung space and with adjacent urban nodal conglomerates. The habitat can be developed with water resources, rustic huts and a small-scale resort. It can be converted to a state park with footpath trails too"

> Vidyasagar, Forester

* The fodder bank, can encourage 'milch cattle' as a subsidiary occupation in the village.

* Initiatives of dairy sheep communities in 1997 towards from fodder revenues are thus evident.

* District administrative finding, with backup from Horticulture department is essential for mango, neem and horticultural crops. (Marginal planting).

> "Today from a highly eroded terrain (1993), we have initiative towards soil and water, conservation"

> Mustafa forest guard

> "Social and psychological fencing, in the initial phases with a track record of transparency and accountability, has paved the way for positive initiatives towards JFM in Chengicherla."

> Vidyasagar, Forester

> " The Forest officer, is highly devoted, honest, a good social worker, humanistic, one amongst the villagers considers all problems with a common sense approach and is backed up with dedicated, honest forest guards too". He always adds that 'you manage the resources by yourself'.

> Locals
PLATE VI

KANCHA 'GRASS CUTTING BY WAGE LABOURERS
- JOINT FOREST MANAGEMENT

PLATE VII

GRASS COLLECTION IN CARTLOADS, BY SUBCONTRACTING
- JOINT FOREST MANAGEMENT
PLATE VIII
GRASS HEAPING FOR SUB-CONTRACT LEASING TO URBAN NODES - JOINT FOREST MANAGEMENT

PLATE IX
PARTICIPATORY APPRAISAL-FODDER GRASS IDENTIFICATION (FOREST GUARDS AND INSIDERS) - JOINT FOREST MANAGEMENT
PLATE X

GENDER AND COMMUNITY IN JOINT FOREST MANAGEMENT
The forester recognises and acknowledges

* The initial deal of purchasing grasses from the government, by the Anjaneya society, as a lease unit for Rs. 2000-3000, and the profits as Rs. 8000, in the year.

* He estimates that a net revenue of Rs. 50,000 can be accrued, for full protection of the grasslands; Rs 30,000 could approximately be the wages for grass cutting. On subleasing by the society the transit charges Rs.150-200 per cart, can be saved, by the society.

* Atleast 175-200 cartloads per year to the retailer destinations in and around Hyderabad-Secunderabad city is apparently perceived, thus an anticipated Rs. 40,000 can be added to the revenue of the society; from the scrub-jungle.

* The survival of large trees of 20" to 30" girth, on a long term basis is assured, by the Forester and logging them on a short term basis can fetch Rs. 12 per kg of log of wood. Thus an anticipated Rs. 4000 - 5000, could add to the revenue.

* The kancha grass cut, can be stored and marketed at a competitive price and distributed for own consumption (20%), while, investing in the seeds can contribute to natural regeneration in the patches too. (Haemato, Mohva)

* The labour charges of one cutting is Rs. 8.00 per person.

* In 1996, from the VSS records, 18 lakhs cuttee have yielded net revenue of Rs.50, 000 to the society, to be shared by the VSS members.

* Gap planting along contours, contour bunding, can involve bamboo planting on 260 ha. Each pole fetching a revenue of Rs. 25/-, soil and water conservation measures are initiated by contour bunding.

* MFPs chosen, by the gram sabahs now are saeethaphal or custard apple (traditional fruit of Telangana) and Reita.

* The JFM programme for usufruct rights of cut, procure and sell of dry fallen fuel wood, is permitted to a certain extent. ‘Tendu or Beedi’ leaves are harvested from the JFM tract, from March to April. A labourer is paid 0.80 paise (less than a rupee) for the harvest of one Katte. About 60-100 katee can be on the average be harvested, per day, by a labourer.

"We get a wage of Rs 80/- per day, by working in two sessions. 1000 Katte are placed in a bag, to be auctioned, in the city market. This is economical than weeding, in January-February, which fetches us Rs. 25/- per day, per person". -Kancha Labourer

* Presently, the VSS has 116 members and 25-30 lease members (1994) and in 1996 (160 members), on the rise.
SUSTAINABILITY ELEMENTS IN JOINT FOREST MANAGEMENT-CHENGICHERLA VILLAGE

Accessibility

There exists local resource centered livestock and milk productions a priority livelihood. Access to fodder banks and 'kancha grass' locally is feasible and ongoing. Diversification of networks in the context of fodder sale, milk sale as primary/secondary links is evident. Consumption of milk is less, but the exchange entitlement mapping in terms of monetarisation of the commodity bundles is evident.

Local resource regeneration of 'kancha grass' is by the coalition of the capacity building of the larger, goud formers who are economically rich, facilitating the 'auctions' and 'purchase, subleasing' of the 'kancha' grass patches. The marginalised 'labour force' and women, have a dual livelihood dependence, in kancha grass cutting (wage basis) and as workers in the rice monocropping patches of the large and medium farmers.

The 'resource use regulation' is by informal networking (institutional) with incentives, barter and adjustments of timings of JFM activities and traditional evolving adjustments, between the locals, the goud communities and the landless migrant communities.

Collective sharing of the profits, is facilitated by VSS membership and the dynamics of JFM the confidence building phase 1993-1996. As an ongoing programme, the benefit sharings are realized, with the evidence of newer entrants into VSS membership.

The internal coherence of survival adaptation mechanisms despite apparent conflicts of labour availability's, past feudal divisions, is evident, from the changing perspectives of the people. The nature and scale of operations in terms of local resource availability (work force) is evident, by the people's verdict. The traditional agro Pastoralism and linkage to the forests, of the yester years is the strongest, bondage to the contemporary scenario of JFM.

Fragility

'Resource upgrading' is prioritised, as per the people's choice and the focus towards 'fuel mixes' in the peri urban fringes, implicates low intensity uses (by sanctions of 'usufruct rights') of the JFM track.
COMMODITY CHAIN-ANALYSIS - FODDER FLOWS IN JFM, CHENGICHERLA

Fodder seed material

Forest Nursery

Natural Forest Reserves

Grass Auctioning (Patches)

Regeneration Patches

Grass-cutting

Kancha grass Heap + Transport

Grass kancha storage

Kancha Grass Transport

Market and Trade centers

Pitting Revegetation and Gap planting

Wage payments

Sale

Reclamation and eco restoration activities micro-water shed construction

Fencing

VSS memberships

Distribution of benefits (equitability)

Fig. 8.3.6
**BIO DIVERSITY IN JFM TRACK- CHENGICHERLA**

- The JFM track, in Chengicherla, has been rehabilitated, with 7500 plantings, in the three year period (1994-97), with an allotment of 25 ha. each and designated as Zone I-III patches.

  Zone I (1994-95) had Sisoo (1000), Subabul (1500) and Babul (2000) along with Drumstick and Stylo. Zone II (1996-97) had Bamboo, Mango, Neem, Woodnut, Usri and Stylo. Zone III (1996-97) had Bamboo, Custard, Neem, Rita, Usri, Rialla and Stylo spps.

- The live-hedges are Agave and subabul.

- Gap-planting, trenching are the modes of rehabilitation along the contours and with water conservation dams.

- The following is the Diversity of species (as *identified by the local ‘insiders’*).

**TABLE - 8.3.15-A**

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kunkidi or Rita</td>
<td><em>Sapindus emarginatus</em></td>
</tr>
<tr>
<td>Maredu</td>
<td><em>Aegle marmelos</em></td>
</tr>
<tr>
<td>Sisoo</td>
<td><em>Dalbergia lattifolia</em></td>
</tr>
<tr>
<td>Babul</td>
<td><em>Acacia arabica</em></td>
</tr>
<tr>
<td>Bamboo</td>
<td><em>Bambusa spps</em></td>
</tr>
<tr>
<td>Moringa</td>
<td><em>Moringa pterigis perma</em></td>
</tr>
<tr>
<td>Mango</td>
<td><em>Mangifera indica</em></td>
</tr>
<tr>
<td>Neem</td>
<td><em>Azadirachta indica</em></td>
</tr>
<tr>
<td>Tamarind</td>
<td><em>Tamarindus indicus</em></td>
</tr>
<tr>
<td>Custard</td>
<td><em>Annona squamosa</em></td>
</tr>
<tr>
<td>Usri</td>
<td><em>Phyllanthus emblica</em></td>
</tr>
<tr>
<td>Rialla</td>
<td><em>Cassia fistula</em></td>
</tr>
</tbody>
</table>

**Fodder Grasses**

<table>
<thead>
<tr>
<th>Local Name</th>
<th>Botanical Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemata</td>
<td><em>Stylosanthus hemata</em></td>
</tr>
</tbody>
</table>
The local Species, in the Joint Forest Management (JFM) Blocks, at Chengicherala (1994-95)(259.65 ha)

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Vernacular Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tectona grandis</td>
<td>(Teak)</td>
</tr>
<tr>
<td>Terminalia belerica</td>
<td>(Thani)</td>
</tr>
<tr>
<td>Cassia latifolia</td>
<td>(Madhuwa)</td>
</tr>
<tr>
<td>Semecarpus anacardram</td>
<td>(Bhilawan)</td>
</tr>
<tr>
<td>Pongamia glabra</td>
<td>(Kangu, Karani)</td>
</tr>
<tr>
<td>Azadiratchta Indica</td>
<td>(Neem)</td>
</tr>
<tr>
<td>Butea Frondosa</td>
<td>(Modugu: Motiga or palas)</td>
</tr>
<tr>
<td>Phalsa</td>
<td></td>
</tr>
<tr>
<td>Dalbergia sisso</td>
<td>(Sisoo)</td>
</tr>
<tr>
<td>Buchanania Latifolia</td>
<td>(Chironji)</td>
</tr>
<tr>
<td>Boswellia sirrata</td>
<td>(Anduk)</td>
</tr>
<tr>
<td>Acacia arabica</td>
<td>(Babool)</td>
</tr>
<tr>
<td>Terminalla tormentosa</td>
<td>(Nallemadde)</td>
</tr>
<tr>
<td>Moringa pterigisperma</td>
<td>(Drumstick)</td>
</tr>
</tbody>
</table>

The Grass species in the degraded and Rehabilitated Forest Track of Chengicherla Village – JFM

The grasses, in the degraded and rehabilitated Forest track of chengicherla under the Joint Forest management include:

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Vernacular Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Cymbopogon caesius</td>
<td>White Kasa gade Red (local)</td>
</tr>
<tr>
<td>* Heteropogon controtus</td>
<td>Edible, green, spear-grass</td>
</tr>
<tr>
<td>* Chrysopogon montanus</td>
<td>Sanne gadde</td>
</tr>
<tr>
<td>* Schime nervosum</td>
<td>(Lal) yerra gade Tella gadde (white)</td>
</tr>
<tr>
<td>* Bothrichloa purtosa (?) spps</td>
<td>Narle gadde</td>
</tr>
<tr>
<td>* Dichanthium annulatum</td>
<td>Marvel grass</td>
</tr>
<tr>
<td>* Isellema laxum</td>
<td>Yerra chenga Gadde</td>
</tr>
<tr>
<td>* Apluda mutica</td>
<td></td>
</tr>
<tr>
<td>* Aristida depressa</td>
<td></td>
</tr>
<tr>
<td>* Panicum antidotale</td>
<td>Burka sambo gadde</td>
</tr>
</tbody>
</table>
### Preference ranking of fuel Trees

<table>
<thead>
<tr>
<th>Botanical Name</th>
<th>Vernacular Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ellinta</td>
<td>Diospyros ehloroxylon</td>
</tr>
<tr>
<td>Mothu</td>
<td>Butea frondosa</td>
</tr>
<tr>
<td>Dhandi</td>
<td>Celastrus Senegalensis</td>
</tr>
<tr>
<td>Kalimi</td>
<td></td>
</tr>
<tr>
<td>Jana</td>
<td>Grewia Populifolia</td>
</tr>
<tr>
<td>Palchenga</td>
<td></td>
</tr>
</tbody>
</table>

### Economics of ‘Kancha’ Grass selling :JFM

- One katte (or fist full heap) is collected and tied as a separate heap, for count sake
- 10 hand cuts (pidiga) make one katte (heap count)
- The wage-cost of Labour, for one cutte cutting is Rs.15-00
- A cart-load sold in auction, yields Rs.15x400=Rs.6000
- 8 Cart-loads of ‘Kancha’ grass can be loaded per acre
- During the peak season, 5000 katte or approximately 12.5 cartloads/day, goes out to the market, yielding Rs.75,000 approximately. Hence per season, the profits for the VSS members is significant.
- On a given day, 4 members can get Rs.100, for grass cutting, at an average of Rs.25/-.
- For tying up or bundling 100 Katte(First heaps), the wage labour is Rs.8/- per head.
- On an average, 5000, Katte, costing Rs.400 as wage labour/per time/day is accrued, during harvesting of the ‘Kancha’ grass.
- The above operations, done for a 3 month period, an alternative days (45 days) costs 18,000 as wages.

If fully functional, in the JFM tracts, auctioned Kancha patches, of 20,25,50 and 100 acres, can be viable, on scaling up the operations (Per comm Vidyasagar IFS)

- Kancha grass is procured from a natural, rehabilitated grassland; it’s a mixture of different spp; its nutritive value and composition is varied; the Dominant species determines the nutritive value. It is the source of green fodder from August to November. As dry fodder, its nutritive value decreases.
- Dry fodder can however be shade dried, compactly packed in layers with addition of Jaggery, Molasses and salt, sealed for 4 months 10-15 Kg dry fodder can thus be converted to 20-25 Kg green fodder. Thus from November, if done-it can result in green fodder in summer. (per comm Dr.B.Banumurthi, Dr. Malik)
**TABLE - 8.3.17**
*Tree-Inventory (LKMS)* at Chengicherla in degraded Forest Track
Local Pastoralists and Village elders knowledge

<table>
<thead>
<tr>
<th>Vernacular name</th>
<th>Botanical Name</th>
<th>Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sacred Tree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulle chintta</td>
<td>Pithecolonium doice</td>
<td>Caesalpinaceae</td>
</tr>
<tr>
<td>Medicinal plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meka megani tiya</td>
<td>Celastrus paniculata</td>
<td>Celastrineae</td>
</tr>
<tr>
<td>Manga Kampa</td>
<td>Randia dumerorum</td>
<td>Rubiaceae</td>
</tr>
<tr>
<td>Nimik</td>
<td>Cryptilepsis buchanani</td>
<td>Asclepiadaceae</td>
</tr>
<tr>
<td>Shevanda vatam/shiwan</td>
<td>Gmelina arborea</td>
<td>Verbenaceae</td>
</tr>
<tr>
<td>Zilladi</td>
<td>Calotropis gigantea</td>
<td>Asclepiadaceae</td>
</tr>
<tr>
<td>Garimunda Chettu</td>
<td>Balanites roxburghji</td>
<td>Simarubeae</td>
</tr>
<tr>
<td>Tella pulcharaku</td>
<td>Antidesma ghasemilla</td>
<td>Euphorbiaceae</td>
</tr>
<tr>
<td>Jede</td>
<td>Anacardium occidentalis</td>
<td>Anacardiaceae</td>
</tr>
<tr>
<td>Narina akku</td>
<td>Albizzia amara</td>
<td>Mimosoidea</td>
</tr>
<tr>
<td>Ayelu aku</td>
<td>Memecylon edule</td>
<td></td>
</tr>
<tr>
<td>Uppi</td>
<td>Azima tetracantha</td>
<td>Salvadoreaceae</td>
</tr>
<tr>
<td>Ghattu Goremedu</td>
<td>Orchrostachys cinerea</td>
<td>Mimosoidea</td>
</tr>
<tr>
<td>(Nalle) elthuri</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Illinta</td>
<td>Diosphyros ehloroxylon</td>
<td>Ebenaceae</td>
</tr>
<tr>
<td>Dhante</td>
<td>Celastrus Senegalensis</td>
<td>Caesalpinaceae</td>
</tr>
<tr>
<td>Motiga</td>
<td>Butea frondosa</td>
<td>Papilionaceae</td>
</tr>
<tr>
<td>Chippal</td>
<td>Opuntia dillenii</td>
<td>Cactaceae</td>
</tr>
<tr>
<td>Yelthuri</td>
<td>Dichrostachys cinerea</td>
<td>Mimosoidea</td>
</tr>
<tr>
<td>Vepa</td>
<td>Melia azadirchthra</td>
<td>Meliaceae</td>
</tr>
<tr>
<td>Chinta</td>
<td>Tamarindus indica</td>
<td>Caesalpinaceae</td>
</tr>
<tr>
<td>Manidi</td>
<td>Mangifera indica</td>
<td>Anacardiaceae</td>
</tr>
<tr>
<td>Yeppa</td>
<td>Hardwickia binata</td>
<td>Caesalpinaceae</td>
</tr>
<tr>
<td>Nalledu</td>
<td>Canthium didymum</td>
<td>Rubiaceae</td>
</tr>
<tr>
<td>Jivigida/Juvi</td>
<td>Ficus infectoria</td>
<td>Urticaceae</td>
</tr>
<tr>
<td>Tinki/Tunki</td>
<td>Diospyros melanoxylon</td>
<td>Ebenaceae</td>
</tr>
<tr>
<td>Sanga</td>
<td>Agave american a</td>
<td>Amaryllideae</td>
</tr>
<tr>
<td>Vepa</td>
<td>Melia azadirchthla</td>
<td>Meliaceae</td>
</tr>
<tr>
<td>Manga</td>
<td>Randia dumerorum</td>
<td>Rubiaceae</td>
</tr>
<tr>
<td>Khunuga</td>
<td>Pongamia glabarata</td>
<td>Papilionaceae</td>
</tr>
<tr>
<td>Bituga/Bidu Tella</td>
<td>Chloroxylon swietenia</td>
<td>Meliaceae</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Shade</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tella manga</td>
<td>Randia dumororum</td>
<td>Rubiaceae</td>
</tr>
<tr>
<td><strong>Fodder</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Namina chettu</td>
<td>Holoptelea integrifolia</td>
<td>Urticaceae</td>
</tr>
<tr>
<td>Palakurccha</td>
<td>Halostemma rheedil</td>
<td>Aspiaedaceae</td>
</tr>
<tr>
<td>Are</td>
<td>Bautinia racemosa</td>
<td>Caesalpineae</td>
</tr>
<tr>
<td>Gotte</td>
<td>Smilax macrophilla</td>
<td>Liliaceae</td>
</tr>
<tr>
<td>Janaa</td>
<td>Grewia Populifolia</td>
<td>Teliaceae</td>
</tr>
<tr>
<td>Aprfrangi</td>
<td>Buchanania augustifolia</td>
<td>Anacardiacae</td>
</tr>
<tr>
<td>Ellinta</td>
<td>Uranechra/Ximenia Americana</td>
<td></td>
</tr>
<tr>
<td><strong>Econstruction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yeppa</td>
<td>Melia azadirachta</td>
<td>Meliaceae</td>
</tr>
<tr>
<td>Thumma Tella</td>
<td>Acacia leucophloea</td>
<td>Mimosoidea</td>
</tr>
<tr>
<td>Jana</td>
<td>Grewia populifolia</td>
<td>Teliaceae</td>
</tr>
<tr>
<td>Pituku</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nallamadde</td>
<td>Terminalia tomentosa</td>
<td>Combretaceae</td>
</tr>
<tr>
<td>Teku</td>
<td>Tectona grandis</td>
<td>Verbenaceae</td>
</tr>
<tr>
<td>Uppi</td>
<td>Azima tetracantha</td>
<td>Salvadoreaceae</td>
</tr>
</tbody>
</table>

* The LKMS matches with the tree species in the local floristic flora - Partridge (1911)

*Botanical names of certain species could not be identified.*
REVEGETATION DYNAMICS, KANCHA GRASS(F4) PATCH-A, IN JOINT FOREST MANAGEMENT-CHENGICHERLA

KEY

- BOUNDARY
- ROAD
- MAXIMUM HUMAN/GRAZING PRESSURE
- HILLOCK
- GRANITE OUTCROP
- GULLY
- HIGH EROSION
- FODDER PATCH

TREE SPECIES(7500 number)
- DRUMSTICK
- BABUL
- SISOO
- SUBABUL
- F1 PLANTING AREA
- F2 SEED COLLECTION
- F3 FODDER PATCH(AUGUST 1994)
- F4 FODDER PATCH ENTIRE AREA- 25 ha

Fig. 8.34.
REVEGETATION DYNAMICS-KANCHA
GRASS(F4) PATCH-B-CHENGICHERLA

Fig. 8.3.5
JOINT FOREST MANAGEMENT IN PERI-URBAN CHENGICHERLA VILLAGE - A
(Disaggregated endowment mapping processes)

"Kancha" grass cutting, Auctioning, Rehabilitation under Joint Forest Management

(+) Forest-based industries
Bio diversity (eco restoration)
Soil + water conservation
Fodder bank for milch cattle & sheep rearing
Milk - co operatives, a new initiatives
para-veterinary services
MFP economics
micro water shed community initiatives

(?)
- ecotourism
- sustainability of JFM
- changing social actors
- new strategies and policies of JFM

(-)
inclusiveness
meso- institutional frame work of peri-urban landscape
transfer of forester and forest guard.

Micro
- grass contracting
- VSS membership
- customary rights
- work-party calling caste
- "de facto" control of auctions
- labour contributions
- barons with bullock cart ownership.

Meso
- NGO Policy and Capacity building
- Economic incentives

Macro
- World Bank Assistance
- AP Forest Policy
- Government JFM programme
- Janmabhoomi-a state programme

Endowment Mapping (Rights over "Kancha" Grass and Forest products)

de facto control (Auctions)

Commodification

- cash income
- sale of forest products & profits shared

Entitlement Mapping

Vulnerability status

Social actors
capabilities
well-being

(The structuration of the landscape)
JOINT FOREST MANAGEMENT IN PERI-URBAN
CHENGICHERLA VILLAGE-B
(Disaggregated entitlement mapping processes)

'Kancha' grass cutting
Auctioning,
Rehabilitation
under Joint Forest
Management

ENDOWMENT
MAPPING

ENTITLEMENT
MAPPING

Micro
- gender division and labour access
- household vulnerability status
- co-operative work groups
- informal networks
- local power politics
  (inclusiveness vs exclusiveness)

Meso
- Benefit sharing
- local elections of VSS members
- newer partners
- market dynamics
- revegetational dynamics
  in time and space
- multivarient livelihood determinants (second line
  male labour force)

Micro
- resource sharing and barter
- patronage of acceptance of
  immigrant (outside) labour
- post feudal legacy of
  'mafidari' (pardon by
  the government)

MESO
- transparency
- accountability
- empowerment as
  newer initiatives

Social actors
capabilities
well-being

(The structuration of the landscape is depicted in fig. A)

Fig. 8.3.8
Resource protection is being realised by 'psychological fencing' (per comm. Vidyasagar, IFS) and the native Agave plantations, as well as locally employed forest guard. There have been instances of reports and immediate calls to the NGO, to put out small fires, indicating the newer forms of self regulation and protection by the local people.

Usage regulation, is further instirionalised, by community initiatives, towards sustainable economic benefits accrued.

Diversification is evident, by rehabilitation of degraded land (by gap planning government) as well as conservation initiatives (check dams, and contour binding) in the jfm track, in a phased manner. Zoning of high and low intensity land use is evident.

- Involvement of the locals, their livelihood dependability on the regenerative processes and collective benefit sharing are indications of traditional beliefs that the 'forest patch belongs to the village' and more so 'kancha grass fodder' as well as traditional trees in rehabilitation initiatives endorse the links between people and the past glory of the Chengicherla village. The trends, suggest towards multiple initiatives, by the people, to combat inherent fragility of the semi and micro landscape, in time and space.

- Marginality

The security of subsistence needs, is allowable in the JFM framework, by 'usufruct', allowances on fuel wood collection, from specified zones. The economics of trade and benefits accrued, are immediately delivered, with no gestation period, by daily wage labour as well as periodic returns, through transparency and accountability, vis-a-vis the Forester, and Chairperson of JFM.

Integration of production consumption activities is a medium term option envisaged, parallel to capacity building and scaling up by the NGO and forests. Collective sharing, dependence on 'processes' and self provisioning by 'cut and carry' basis is perceived, in the process, by the newer initiatives.

However, a limitation overcome, is the facilitation of 'inclusiveness' of all communities which is apparently being realized by the NGO and forester now.
Diversity:
Small scale, interlinked diversified production/consumption activities, temporally and spatially differentiated, in terms of fodder banks, sheep rearing, milk fodder forest linkages, is perceived by the Forester. Location specific, integrated multiple activities, towards stability too is prioritized as 'macro water shed catchment area' and 'urban rural based eco-tourism spot' with linked local livelihoods.

Niche opportunities in terms of harressed petty trade (forest products, industry linked products, fodder rich medicinal and aromatic plants. (per comm. Dr Rajagopal) and self consumption (economic produce, more realistically entitlement exchanges through cash/sale), are to be realised. The diversified resource use objectives of JFM are apparently a reality in making at Chengicherla, keeping in context the traditional socio-cultural customs of peasant Pastoralism and kancha 'grass' as a native fodder zone, in the peri urban location of Hyderabad metropolitan.

RESOURCE CHARACTERISTICS OF JOINT FOREST MANAGEMENT IN PERI-URBAN CHENGICHERLA VILLAGE

* Accessibility – the changing perspective now, from inaccessibility.
-Chengicherla JFM is an isolated case, in the context specificity of the surrounding peri-urban dynamics, Opportunities for diversification, keeping the socio-cultural and economic implications of the local micro niche and the peri-urban options are apparently 'open' from the viewpoint of the Foresters and local NGO. Accessibility to market networks, urban nodes, horizontal transfer of technology is possible, indicative of mobility from an earlier 'semi-closeness' phase in the early and mid 1990's.

* Dependability on inputs in forest nursery seedlings, pre-treatment chemicals, and more specifically the human labour force, is high and reliable. Market feasibility and viability to the 'ongoing' purchase of the 'Kancha' fodder grass as well as 'diversification of other forest products for market is existing, on a continuum. The cost of mobility, infrastructure, support systems and production/exchange activities, is shared by participatory Joint Forest Management and the members have accrued profit sharing. This is evident from the economics of kancha grass-cutting and the commodity-Actor-Network analysis. (Fig. 8.3.6)
<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Interests in resource use and management</th>
<th>The rationale</th>
</tr>
</thead>
</table>
| * Foresters/Forestry Department | * Rehabilitation of Degraded forest patch  
* JFM as a success programme  
* Community linked participatory approach  
* Options for a regional park  
* Fuel wood, Fodder and multi options for the local communities. | * Conservation  
* Transparency  
* Livelihoods and economics |
| * Forest Guards           | * Protection and incentive-based approach.                                                              |                                                 |
| * Landless poor migrants  | * Seasonal livelihood, as wage labourers and economics of daily survival.                              | * Livelihood and security                        |
| * Auctioners /Large farmers | * Sharing of profits as middlemen from the auctioned patch of grasses.  
* Linked to forestry department, VSS and market traders for sale of milch grass. | * Commerical options                            |
| * The NGO (MVR Foundation) | * Thrift and credit society; Linkages of JFM to fodder / dairy based livelihoods.  
* Recognised wage rights, responsibilities linked to conservation and profits from selling grass. | * Livelihood and security (women)  
* Gender and institutionalisation of JFM |
| * World Bank              | * Phased JFM success programme as a model in Chengicherla, linking society towards conservation and livelihood security. | * The success story at Chengicherla             |

Contd'.....
**TABLE - 8.3.18**

**STAKEHOLDER ANALYSIS - JOINT FOREST MANAGEMENT - CHENGICHERLA**

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Interests in resource use and management</th>
<th>The rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Illicit Fellers</td>
<td>* Small wood timber, branches and fuel wood sources.</td>
<td>* An outside chance (because punishments / fines from guards is experienced)</td>
</tr>
<tr>
<td>* Village Local leaders and large Goud farmers</td>
<td>* Partially are auctioners in nexus with tradesmen for grass auction.</td>
<td>* JFM conservation as a developmental enigma, on the peri-urban edge.</td>
</tr>
<tr>
<td>* Menfolk</td>
<td>* Stakes towards commercialisation, industry links to forestry are higher</td>
<td>* Soft options on JFM (because it is an insulation factor, for survival of the family)</td>
</tr>
<tr>
<td>* Logging companies and private Teak plantation entrepreuners</td>
<td>* Can contribute to VSS capacity building in terms of economics.</td>
<td>* Forestry-commercial farms-a new link in JFM strategies.</td>
</tr>
<tr>
<td>* Policy makers (Forestry department)</td>
<td>* JFM is a success story in Chengicherla and well initiated.</td>
<td>* It integrates changing policies and reforms, along with NGO linkages.</td>
</tr>
</tbody>
</table>
SWOT ANALYSIS OF THE JFM PROGRAMME

**STRENGTHS**

- Favorable political climate
- A segment of FD staff positive
- The process has been set into motion which would be difficult to reverse
- Concept and program known to people through press and experiences of neighbouring villages
- Considerable experience and learnings on the JFM processes are now available in the State.

**WEAKNESS**

- The programme is based on an executive order and not on an Act.
- Program still dependent to a considerable extent on good officers and support of FD for protection.
- Peoples' knowledge of the programme's details and ability to understand the management practices low.
- VSSs' rights override customary rights in some places. In places where the losers have not been compensated for, there could be repercussions on the VSSs in future.
- The FD is still not equipped to organise the people and provide the necessary training.
- Limited reach of the FD - several open questions in terms of what happens to problems created by the formation of VSSs for those outside VSSs areas.
- Individual benefit programmes still a gray area.

**OPPORTUNITIES**

- Concept has been popularised and people are eager to have VSSs in the village
- Ecotourism and regional park, a viable option.
- Fodder and dairy linked farming in the JFM track.

**THREATS**

- Change in political will
- Handing over the VSS to the people without adequately preparing them for handling the management.
- Change of FD staff midway through the program (transfers)- A reality now!
- Too much money too soon
- Decrease in interest after World Bank funding is over.
- Marketing of NTFP especially those, which do not have a local market.
* Niche opportunities and gains from the rehabilitated track is high, with the long-term sustainability of the natural resources. The JFM is however, viewed as an enigma, by the Goud-liquor trade barons and larger inabsentia farmers, as well as the social actors in ‘land sellouts’, due to the fall in the economic – land pricing. In the village and complexities. They are not detrimental to the issue, but are the apparent bottlenecks to JFM initiatives.

* The environmental costs and benefits of the development of a water shed and economic returns is slowly being reaffirmed by the NGO women labourers in JFM and few elder farmers.

* The forest landscape, is apparently vulnerable to slow degradations from (a) surrounding industrial belt (b) human-induced alterations by interference and neglect, under situations that the JFM-NGO processes fail. However, with the NRSA-HUDA zoning it as a ‘green-lung space’, it is realized as not an obstacle to infrastructures development, by the Forester and NGO. The reality of the issues, would probably be perceived, by the locals, during the scaling of JFM initiatives, towards empowerment and water shed development a realistic future option of the NGO who are continued in the efforts.

* Fragility, in terms of landscape, adjoining the JFM tract, affecting local livelihoods (rice monocropping) rather than the rehabilitated tract is evident, from the people’s viewpoint. The initial low-resource capacity of the people, in the 1980s, has been built-up, by the NGO and the process is underway towards JFM capacity building. NGO led – human adaptation mechanisms, with gender and envoirmental change is in progress at Chengicherla.

* Marginality, from an earlier (1993-94) low productivity of “Kancha grass”, due to smaller patches and initiatives of the locals in auction (limited approaches to JFM), the phase now, is in surplus generation and reinvestment (in terms of loan sanctions, for self help livelihoods in alternatives. However, ‘equity’ in benefit-sharing, is apparently an issue which is not clear, since, the resource-persons (VSS chairman, NGO, Changed forester/Forest guard) as well as the people affected (more so, due to absence on the day of the meetings) are seemingly not seeing each other ‘face to face’. This may be the inability phase towards benefit – sharing, despite an earlier transparency, and accountability phase, at the inception of the JFM. (per comm Vidyasagar, IFS, retd)
* **Diversity**

_Heterogeneity_ induced strong location specificity of production options is a reality, in the making of the landscape. The wider applicability and benefits associated with scale is implicated, in the perceptions of the forester and forest guards which is vividly captured in the messy matrix.

* **Niche opportunities**, as an unique one, (peri-urban edge), however with potential and comparative advantage (rustic eco tourism, adventure tourism – per-comm. Vidyasagar IFS) is one of the resource characteristics of JFM in the making. A possible multi-stake holder initiative may seemingly drive it towards a reality.

* **Human adaptations**

Opportunities for production and exchange, might possibly involve networking, in the peri-urban landscape, towards sustainable livelihoods/cities rather than sprawl as a component of the ongoing JFM Scenario.

The resource Characteristics, mentioned above are in the moving frame (Reemers 1996), from issues such as inaccessibility, fragility, marginality, diversity, niche opportunity and human adaptations (Jodha 1995), in the context of non equilibrium ecology and fuzzy entitlements all of which are caught in the web of causation.

* **Participatory monitoring and ‘Involving the people’**

The biodiversity, rehabilitation and vegetational dynamics of JFM are portrayed in the participatory formats of the multiple stakeholders, as implicated in the Tables 8.3.15A–D, Tab.8.3.17 and Fig.8.3.4 and Fig.8.3.5.

* **Micro Management of JFM - Ecotourism**

* **Possible limitations**

Under human altered landscapes, ‘the boundary process’ (Marybeth and Sauvajot 1997), due to intrusion, associated disturbances and broad interfaces between the developmental areas and the preserved habitat is possible. Along with this, ‘linear elements’ can divide and fragment the landscape.

In the context of the JFM tract at Chengicherla, it is evident that the following factors may determine the micro management of the eco setting, more so, under the proposals of rustic eco-tourism.
The adjacent realities of the growth industrial belt residential development, infrastructure transit roads, and existence of a power grid corridor and mechanized abattoir are the edge of corridor. The linear elements of roads, bio-tech preserves on edges, as well as regulation of hot spots of camping areas, day use areas, waste disposals illicit road vehicle activity, a major limitations in Chengicherla due to the transit toddy tapers, and the influx of private holdings might be the ‘grey areas’ to tackle, in the post JFM phase, due to the urban proximity of the tract.

*The micro-realities and challenges ahead in JFM programme are towards :*

* Linkage building and development of cooperation between institutions.

* The roles and capabilities of other strategic partners may often need be strengthened.

* Ecotourism, need be viewed, as being on option, which is on-going with conservation and rehabilitation of livelihoods and not as another alternative (a part of the basket of opportunities)

* Real participation and ownerships (usufruct rights) of resource management processes, at the village level, may often precipitate challenges to, an rely upon changes upwards, through govenment power structures.

* Again, reports and ground realities, need translate, through the NGOs and researchers, to facilitate changes (realistically slow) in government policy (in the case of Andhra Pradesh, the political will for JFM is high), power structures (the Forestry Departmental dynamics of transfers and rewards). Otherwise, community based resource management is unlikely to succeed in the long run (Williams et al 1998).

* The present investigation, contributes as small beginnings, to reveal, the many challenges are to be learnt, for, more complex and critical community-based initiatives, in the local context and reality, under transience.
THE PEDDASHAPUR VILLAGE

Participatory monitoring... from this area,... many thought provoking questions are arising and where many unsolved dilemmas lie.

If monitoring is a part of a sustained learning process, it has to have local relevance... This takes time and involves compromise... this has meant moving away from an approach to monitoring, that provides proof for hard headed scientists towards identifying indicators, that better reflected farmers' perspectives on the changes they experiences.

- Abbot & Guijt 1998

On Indicators

They are bits of information that highlight what is happening in a large system. They are small windows that provide a glimpse of the big picture

Sustainable Seatte 1995
- From Abbot & Guijt 1998
8.4 THE PEDDASHAPUR VILLAGE

SEARCHING THROUGH INDICATORS
THE CASE STUDY OF TRANSITIONAL FLORICULTURE COMMUNITIES

Introduction

Paddashapur, an expansive green revolution village, located adjunct to the National Hyderabad, Bangalore Highway, had been one of the central hubs in grape cultivation, since the 1980s. The village, is located, 20 kms away from the local agricultural university 8 kms away from Shamshabad, the secondary market node on its East. The majority of the farmers are landless (70% approx.) and the marginalised (20% approx) are in the cultivation of dry sorghum, in fallow lands and mixed cultivation of small Cereals / Vegetables/Pulses with transitions from Rice to Floriculture. Majority of them, are wage labourers who work in the floriculture picking, grading and post harvest transportation of the produce, to the central Hyderabad market and its nodes, 35-40 kms from the village. The rural-urban straddlers, embark on small initiatives on Floriculture, on their own fields too. Multivariant livelihoods into Fodder, milk trade, coupled with contractual labour, both within and in the surrounding belts is common. Under depleting water tables and brought, falling is a desperate option to be sought by a majority, of the small farming communities. Large farmers are on a breakaway, by shifts from Grape to Floriculture. Majority of them, employ the wage labourers with varied dynamics of human interactions 'visible and invisible' insulating the mechanism of 'coping' up to uncertainties of the marginalised traditional / transitional Floriculture communities.

Complex mechanism of adjustments and institutional factors (human attitudes) interplay, in their livelihoods with safety nets into small animal dairying and there are apparently 'invisible' adaptive strategies. The participatory monitoring exercises, with them, under diverse situations, were sought, under transience, on the process continuum. Indicators, were the key results of the analysis, for a multitude of complex interactions, were deciphered, amidst uncertainty and fragility of the resource base. They are interpreted, in the frame of the insiders' participatory mode, through a chequered experience of learning by 'living with them' (Chambers 1997) - (Tables 8.4.2 to 8.4.5 and Fig. 8.4.2. and 8.4.3)
FALLOWING – A SHifting Priority of Small Farmers’ Livelihoods

The Government’s initiatives, towards land distribution in the 1980’s, when there was a severe drought period, was primarily intended to reduce the area under cultivatable wastes and primary grazing lands. (per comm. Dasaratha ramarao Rao, Peddashapur). Farmers perceive increased fallow areas, and reduced net sown areas, relative to the rainfall patterns.

* We have not had rains properly from the 1990’s.
* Of late, we feel that agriculture is difficult, due to shortage of water, during of bore wells and I cannot afford a bore pump.
* They get more money from selling milk to cities.
* We are not cultivating this year (1994-95). Fallows are more, since 1-2 years here.

The farmers response to questions such as why fallows? how long have they been practicing? are priority ranked as under.

**Table - 8.4.1**

*Issue: Why fallows?*

*Priority ranking by small farmers - Peddashapur*

<table>
<thead>
<tr>
<th>Responses</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regeneration of land, for self nutrition</td>
<td>1</td>
</tr>
<tr>
<td>Area earmarked for grazing own cattle.</td>
<td></td>
</tr>
<tr>
<td>Disinterest - due to low productivity, water and labour problems. Now finance for inputs land unfit for future cultivation.</td>
<td>2</td>
</tr>
<tr>
<td>Soil compaction can occur due to <em>Prosopsis julifolia</em></td>
<td>3</td>
</tr>
<tr>
<td>Suitable for coarse-grain cereal production</td>
<td>4</td>
</tr>
<tr>
<td>Intensive agriculture on the other side is our priority</td>
<td>5</td>
</tr>
</tbody>
</table>

The dynamics of fallows, as evident from the mental mapping of the oral-testimony of small farming communities in Peddashapur, as well as Ethbarpalle (because, the researcher was sharing common issues of fallowing, with the insiders simultaneously, in the study areas) indicates:
Fallowing is an indication of ‘instabilities’. The farmers have limited resource inputs (labour, water) and seemingly opt out to recoup lost fertility, by allowing the land to be uncultivable; maintain low fodder pasture on the tract (Sorghum-fodder), to save them, for the dry season (by harvest and stocking).

Under deficiency of rains, depletion of water tables lack of financial resources, interventions of new technology market opportunities (tomato trade, floriculture trade), they seem to resort to fallowing.

Keeping in mind, the food security of the marginalised poor, (Gopal and Sashi Kumar 1996) it could be suggested, that crop rotations, cultivation of food secure crops with crop loans, practise of share-cropping and options to use storage bins, may be envisaged, to help them to tide over the lean season. It is again possible to seek out options, in an event of continued existing of fallow lands, towards improvement of the feed resources, if the farmers are prioritising on small animal-based milk production, in the area.

Given the reality, that there is no market for coarse grain cereals, shifting food habits, constraints in dry land small scale agriculture, the farmers feel:

* Decline in poor soils is inherent and further neglected, due to focus on commercial crops.
* They do not feel confident, about the Governments’ initiative or market assistance, towards having their dry-land tracts on long term lease, or tenure-right protection or crop insurance.

They feel that with increased fallows, there is decreased availability of crop residues as fodder and cattle can be sent out for grazing. Parallel to this, under the advent of rains, with improved pastures, better feed would possibly be available for dairing. Thus, the insurance of fallowing, under dry land conditions and the safety nets of livestock production is perceived, in the context of the ‘insiders’.

Farmer-determined, NGO-based credit support, towards silvo-pastoral cum dry horticultural crops, towards small-scale food-access, and livelihood security, may be an uncommon opportunity, to seek. This is so, due to the shifting priorities in milk-fodder-cum floricultural (internalised sustainance) networks in Peddasahpur. Thus, given the low potential of fallows, for crops, there appears scope for livestock production, based on better utilization of the fallow lands.
PLATE XI

PEDDASHAPUR – FLORICULTURAL TRANSITIONS

ABANDONED GRAPE VINE & TRANSIENCE
PLATE XII

PEDDASHAPUR – FLORICULTURAL TRANSITIONS

FLORICULTURE – WAGE LABOUR

PLATE XIII

FLORICULTURE LANDSCAPE
In Peddachapur village there is the evidence of increasing fallows, shifts from traditional rice growing to grape growing (1980s) and towards floriculture (mid 1990s) due to the following reasons.

1. Depletion of the water tables.
2. Peri-urban opportunities in trade
3. 70% and more are marginalised and work as labour in floriculture.

The perceptions of the farmers are vividly captured by the messy matrix of transience which suggests towards variations of perception with relevance to changing livelihoods.

**PARTICIPATORY MONITORING - SEARCHING IN THE MAZE OF UNCERTAINTIES WITH INDICATORS - PEDDASHAPUR**

In Peddachapur Village, the vortex of non-equilibrium ecology is perceived, as a 'daily reality' by the insiders. Given the situations of flux/transience, to capture the uncertainties, the salvaging operation, was by 'putting the pieces' together, from the participatory methodology and naturalistic inquiry, into the communities.

The results and discussions are presented in a 'chequered format', keeping the focus. The entire 'Participatory monitoring' are formatted as

* **Grass root indicators** are signals of environmental quality/change. It could be at the individual, household or community level. It may document a local system of observation, practise or indigenous knowledge (IK). It can be a set of multiple indicators, pattern, flow of activity, representing a particular phenomenon, predict/stimulate a decision or action. (Hambly 1996)

* **Experiential indicators** are reflective of the environment or socio-economic conditions, which are site specific and reflect the needs and expectations of the individual or communities (GTZ 1997, as quoted in Abbot and Guijt 1998)

* **Surrogative indicators** suggests indirect measures to seek the situation context. (Abbot and Guijt 1998)

* **Doing away with indicators**: This is perceived by asking the insiders to reflect on local context, comparisons, changing events, diversity, local analysis with local perspective, recording-indicative of change and choice options. (Davies 1998a, 1998b, quoted in Abbot and Guijt 1998)
### TABLE 8.4.2
Rural-urban interactions-Peddashapur
The village Livelihoods linked to survival options

<table>
<thead>
<tr>
<th>Village Activity for Supplies,Services</th>
<th>Village Activity As a market trade centre</th>
<th>Village Activity As a Workplace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groceries</td>
<td>Milk</td>
<td>General labour</td>
</tr>
<tr>
<td>Education</td>
<td>Floriculture produce</td>
<td>Small Labour</td>
</tr>
<tr>
<td>Health</td>
<td>Vegetables</td>
<td>Masonry</td>
</tr>
<tr>
<td>Entertainment</td>
<td>Fruits(Grape)</td>
<td>Sandquarrying</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td>Granitequarying</td>
</tr>
<tr>
<td>Trade Contracts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selling Plots</td>
<td></td>
<td>Contracting</td>
</tr>
<tr>
<td>Market linkages</td>
<td></td>
<td>Land-Selling</td>
</tr>
<tr>
<td>with medium &amp; large</td>
<td></td>
<td>Self-Selling</td>
</tr>
<tr>
<td>enterpreuners</td>
<td></td>
<td>Employment</td>
</tr>
<tr>
<td>Newer Varieties of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>propagating material(roses)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vermicompost</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Small loans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeds,pesticides,Fertilizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repair and Maintainance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Features of channel-1 village Livelihood survival strategies, from Local Terrain to market place/per urban town/city

Activity 2

<table>
<thead>
<tr>
<th>Farm Activity As a source of supply</th>
<th>Farm as a Market-gate</th>
<th>Farm as an employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td>Milk</td>
<td>Casual labour</td>
</tr>
<tr>
<td>Floriculture</td>
<td>Grapes</td>
<td>Posts &amp; Telegraphs</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Floriculture</td>
<td>Small-time business</td>
</tr>
<tr>
<td>Vegetative propagated material</td>
<td>Vegetables</td>
<td>Self-employment</td>
</tr>
<tr>
<td>Bricks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pottery</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The village livelihoods linked to activities in the nearest trade centre, in the peri-urban fringe of Hyderabad metropolitan:

Case-study: Peddashapur, with transitional floriculture (Shamshabad mandal, Ranga reddy district, AP)
**TABLE 8.4.3**
Determinants and associated Indicators of peri-urban Vulnerability and well-being at different levels in Peddaspapur village

<table>
<thead>
<tr>
<th>Individual Level</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access to adequate nutrition and health care, primary health care</strong></td>
<td>• Local doctor and hospital available for emergency situations. Transitional food habits are evident in the households, with shifts from subsistence sorghum to rice and purchase of rice, from rations.</td>
</tr>
<tr>
<td><strong>Access to adequate education</strong></td>
<td>• Primary and high school present, most of the children, work in floriculture farms in the early mornings (5.30 – 7.00 am) and rush to local, government schools, if economically affordable. Education till high school is in the local medium, later the children, in most instances, diversify into agricultural-rural-urban markets and newer ‘niche’ operations. (At this stage, vocational education and opportunities for intake into training, by Loyola academy is apparently feasible).</td>
</tr>
<tr>
<td><strong>Access to adequate income</strong></td>
<td>• Accumulated income is by diversification into manifold activities, in floriculture, fodder and milk sell outs, wage labouring combined with individual farming, along with contractual farming. Household members have diverse portfolios. Newer entrepreneur-based priorities are the strongest shifts, because advance ‘monetary income’ is assured. Government and private jobs, on permanent/contractual basis is parallel, yet internalized into the household income. Informal work sector, in fodder sale is probable. Floriculture and milk sales are assured incomes.</td>
</tr>
<tr>
<td><strong>Access to credit</strong></td>
<td>• Newer private entrepreneurs, in conjunction with large farmers are the sources for credits; sometimes contractual farming can secure credits; networking on ‘thrift and credit is lacking; bank loans were once important. <strong>contd...</strong></td>
</tr>
<tr>
<td><strong>HOUSEHOLD LEVEL</strong></td>
<td></td>
</tr>
<tr>
<td>---------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Household type, Structure and Access</strong></td>
<td><strong>COMMUNITY LEVEL</strong></td>
</tr>
<tr>
<td><strong>Access to housing and community access to basic needs</strong></td>
<td><strong>Safety nets</strong></td>
</tr>
<tr>
<td>• Cemented, Fuel mixes with firewood, two-hearth cooking, gas stoves or kerosene stoves, with one-window ventilation (optional). Reserve Fuel mixes is the norm and simple food cooking is practised. Small animal stall feeding, dried cow dung exists in houses.</td>
<td>• Negotiations with private entrepreneurs and informal networking with middle men, towards petty trade, chit-funds, access to seeds, fertilizers, pesticides, maintenance of informal local household loaning is common. Bore pump community access to water is common. Community access to basic needs, is sanctionable due to political and large farmer enterprenuerships, Community ‘networking’ and accumulated strategies, with newer partners is the norm, among small farmers in Peddashapur; more so due to earlier commercial grape growing and agricultural experience/earlier contacts.</td>
</tr>
<tr>
<td>Household members are in wage labour, individual family farming, (diversified into floriculture transitions). Rural–urban straddlers (men) are in floriculture, fodder, milk-trade. Women attend domestic chores assisted by children at home, as well in floriculture-picking. Fuel gathering is minimal, due to lack of optional time and increased focus on schooling, transit to secondary nodes for worktrade. Ownership of cycles common, scooter-rare; sanitation is open-access.</td>
<td>• Access to government ration shops, for basic necessities or else private petty shops, on credit. Credit facilities sanctioned, by entrepreuners and large farmers (Wage employment in Grape farms continue, parallel with Floricultural transitions).</td>
</tr>
</tbody>
</table>
### Marginalised landless farmers and small farmers perceive the forces of

- Land sell outs and fallowing by large farmers.
- Resilience reinforces diversity of dry sorghum cultivation and floriculture.
- New entrepreneurs support small farmers rather than government initiatives.
- The breakdown of the grape cultivation.
- Shifts from farming *per se*, on their own lands.
- The household work labour force and post-harvest transit is prioritised.
- Large private farms in their village, are buffers for employment

**The NGO feels**
- The village is not organised and have a 'mob' temperament and community initiatives do not work here.
- Agriculture is going to be succumbed to industrialisation.
- Small farmers are on a survival strategy.
- Large farmers have time, money to innovate, if ever.
- The village as a potential towards agro business.

### Pastoralists / Pottery livelihood based communities view

- Urban conversions are on the rise.
- They are the last of the line in the profession and on the decline.
- Their livelihoods are not addressed to by any external agencies.
- Conflicts with local farmers.

**The youth and entrepreneur small farmers, view the NGO initiatives as**

- Promises not kept.
- Personal gains and without helping the villagers.
- *The fuel alternative plan was a failure*.
- With skepticism, because he has run away, to the other group (Lambadas, migrant Gypsy communities), at the end of the village to start a community school.

**The Private Entrepreneurs (city based) feel that**

- Work force of labourers and the large farmers, in commercial floriculture is a good beginning.
- Youth and initiatives in floral nursery is worth the investment.
- Small loans and support can be informally covered, for the wage workers/small farmers.

---

*Contd...*
<table>
<thead>
<tr>
<th>That they can (villagers) among themselves initiate a NGO</th>
<th>There are multiple stakes in business at Peddashapur village due to favourable micro - dynamics and strategic locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>That they can be educated and be trained in vocational education</td>
<td>The earlier initiates of the NGO was a bad experience, to all of them</td>
</tr>
<tr>
<td>The earlier initiates of the NGO was a bad experience, to all of them</td>
<td>They have less of faith in government policies and extension programmes</td>
</tr>
<tr>
<td>They have less of faith in government policies and extension programmes</td>
<td>There are multiple stakes in business at Peddashapur village due to favourable micro - dynamics and strategic locations</td>
</tr>
</tbody>
</table>

The women folk perceive

<table>
<thead>
<tr>
<th>Wage labour in floriculture as a survival strategy</th>
<th>The large farmers as wage employers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel mixes and adaptive livelihoods (food changes) is a reality</td>
<td>The NGO have been contributing to their education, housing and cultivation requirements</td>
</tr>
<tr>
<td>Children’s education is important</td>
<td>Wage labouring is versatile in the village (grapes, vegetables to floriculture)</td>
</tr>
<tr>
<td>Dairy enterpreuner men folk are involved in floriculture trade (risk aversion and diversification) as a support system for the household economy.</td>
<td>The large farmers as wage employers</td>
</tr>
<tr>
<td>The business venture with new partners and the village sarpanch is from the business community (Gujarathi), to which they are supportive.</td>
<td>The NGO have been contributing to their education, housing and cultivation requirements</td>
</tr>
</tbody>
</table>

The Ethic Lambada hamlet view

<table>
<thead>
<tr>
<th>The Village Agricultural officer (VA0)</th>
<th>Questions the inadequacies of wrong entries in the land records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is honest and a traditional farmer staying in the village from 50 years.</td>
<td>Youth and agricultural farmers as innovative towards vocational training</td>
</tr>
<tr>
<td>Seventy percent are landless and 20% are small farmers here and they are target group who need to be educated and given better options in their livelihoods.</td>
<td>Seventy percent are landless and 20% are small farmers here and they are target group who need to be educated and given better options in their livelihoods.</td>
</tr>
</tbody>
</table>
### TABLE 8.4.5

**MESSY MATRIX OF TRANSIENCE-II**  
*Difference, Distribution and Dynamic matrix Peddashapur village*  
*(Micro-realities of Insiders)*

<table>
<thead>
<tr>
<th>Contingent factors</th>
<th>Time and space variability</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Depleting water table with fallowing the land and livestock, as a survival option with milk flows*</td>
<td>* Wage labour as the central issue, for survival under crop diversification, a long term ‘buffer’ and commercialisation of commodity.*</td>
</tr>
<tr>
<td>* Wage - labour flux and opportunities into cities.*</td>
<td>* Dual livelihoods (dry and wet land farming) with extended rural and urban, opportunities towards livelihoods subsistence.*</td>
</tr>
<tr>
<td>* High premium on lands for sale*</td>
<td>* Adaptive food, land, fuel mix options and fuzzy entitlements with monetarisation of economic produce.*</td>
</tr>
<tr>
<td>* The village is on the international airport corridor (Shamshabad mandal).*</td>
<td>* Newer entrepreneur opportunities of floral nurseries - a success*</td>
</tr>
</tbody>
</table>

**Human interventions**

- City entrepreneurs, small farmers, wage labours networking and sanctions  
- Newer entrepreneur opportunities of floral nurseries - a success

**Active management**

- Floriculture premium sanctions and by-back facility  
- Private-entrepreneur and cold storage linkage facilities at secondary market nodes.
- Attractive payment terms  
- Milk and floriculture flows  
- Alternative daily, diversified embankments into farmers (own or as wage labours) or into urban nodes  
- Power relations (informal) of newer businessmen and middlemen.

**Unintended consequences**

- Marginalisations of small livelihoods (pottery, carpentry)  
- Fallow lands  
- Change and adjustments in food habits and ‘transit’ livelihoods to urban centers.  
- Shifting priorities of farmers (land sell outs)

**Dynamic, non equilibrium process**

- Agricultural land → industrialisation  
- Market orientation of commodification  
- Loss of pastures, misappropriation of CPR and withering traditional cropping  
- Low level water tables  
- Land sell outs and urbanisation (new apparent jobs!)

**Emergent themes**

- Small entrepreneur additions  
- Newer linkages to market economy  
- Training and vocational education for unemployed youth - a need  
- Newer niche opportunities to entrepreneur demands

**Social and ecological history**

- Rice → Grape → Floricultural transitions  
- Traditional seeds / pasture / water resource - a history.  
- Transition to hybrid varieties (1970s)  
- Large farmers, agricultural labours as the new migrants (from 1960’s to date) - a growing work force
* Few indicators, more information are indices of success in the situation context. This is perceived by asking the insiders, to share one significant change, which may probably have impact, on their livelihoods, or promote food and livelihood security.

**THE GRASS ROOT INDICATORS - PEDDASHAPUR**
*(Participatory responses)*

* In 1996, there is a trend of increasing land purchase, diminishing land available for agriculture. Secondly, there is severe water shortage with ground water contamination, due to existing chemical/metallurgical industries... Surana Chemicals, which is closed now. Thirdly, there is agricultural labour shortage, due to temporary/seasonal jobs in the urban industries (Rs 50/- day)

* The cropping calendar and seasonal activity calendar as compiled by the insiders suggest the local diversity of crops in the 'Kharif' (Monsoon) and 'Rabi' (winter season). The Kharif crops include Rice (Vare), Sorghum (Pache Jonna), Maize (Makka), Pennesitum (Sajja), Castor (Amadam), Red gram (Tur), Groundnut (Palle), Chilly (Mirchi), Brinjal (Vankaye), Bitter Gard (Kokero) cultivated from June (Murgersera) to October-November (Deepawali).

* Bitter Gourd (karela), Coriander (Dhania), Horse gram (Chekudu), Grape (Angur), Jasmine (sanna malle or Jivvi) and Rose (Gulabi).

* Green vegetables (Palak, menthu kura, thota kura) and Lady’s finger (Bendi)

* The agricultural lands are sold at Rs 3.0 lakhs/acre (on the national Highway 7), while a little interior at Rs 1.25 lakhs/acre if water is not available. Severe changes such as these, are apparent from 1991 in the village. Earlier in 1994-95, the cost of land was Rs. 1.0 lakh/acre, but in 1996 it is Rs 3.0 lakhs.

* Large and medium farmers, have mortgaged their lands to urban-buyers, since 1995, because the government had identified the zone as a potential industrial area. They have now diversifed into shops, real-estate trade and financial loan operations.

* Small farmers have switched towards floriculture, primarily due to market-demands, and a significant attitude, towards seeking and acquiring a city loan, from the Floral Merchants, in urban areas, of Rs 20,000 to 30,000 a monetary insurance, which otherwise, cannot be achieved under farming circumstances in the region. At any given day, small remunerative packages of Rs 1000/- is available, on credit from the urban merchants.
As per the records of the VAO(1994) Small farmers (with 2.5 –5.0 acres) are 100-135 and marginal farmers (less than 2.5 acres) are 85 and the landless poor households are approximately 100.

The current fallow is 1712.08 acres, and Irrigated land is 734.10 acres.

The manure is applied in Floriculture operations, 1 cart load, as 4.5 tones and costs Rs 1100-1500.

A typical meal consists of Jonna (Sorghum) or wheat ‘roti’ (bread), cooked rice, with palak (green vegetables- boiled), ‘gobi’ (cauliflower) tomato (Tamoto) and tea. Pulse and rice, kerosene is from the rations goat/ hen meat and eggs are mandatory, during weekends.

With the daily labour payments of Rs. 20/- (per female) Rs 27/- (per male) and sometimes a low of RS 10/- (per female) in farming, and the changing options of Rs 80/ - Rs 100/- per day (in urban masonary work), we are opting for dual livelihoods on – inabsentia temporary wage labourers in other farms. Women and children work in Floriculture, during the mornings on our own fields we cultivate Rice and Sorghum (dry patches) for subsistence (food) and fodder (sell/consumption for cattle) and integrate with fodder/milk sale, to the city, enroute our daily embankments for jobs. Parallel to this, they negotiate, as agents of small finance, as brokers for agricultural land sell/buy fertilizer subsidies and petty trade of fruits vending (Key informant’s view).

Barter in terms of allowance towards grazing of cattle, for the sake of cattle, sheep or goat manure, allowable water access at bore-points, mixed stock herding of large farmer’s cattle for trade or rights towards access to fire wood and festival advances is the norm in Peddasapur.

### TABLE-8.4.6

**Priority ranking : Constraints in cultivation of crops, by small and marginal farmers Peddasapur**

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<thead>
<tr>
<th>Crop</th>
<th>Disease</th>
<th>Labour availability &amp; time</th>
<th>Cost inputs &amp; fertilizers</th>
<th>Weeds</th>
<th>Drought &amp; water deficiency</th>
<th>Transport &amp; Mrkt.</th>
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<tr>
<td>Rice</td>
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<tr>
<td>Sorghum</td>
<td>4</td>
<td>1</td>
<td>6</td>
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<td>Grape</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>5</td>
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<td>Jasmine (Jivvi)</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>3</td>
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<tr>
<td>Rose (Gulabi)</td>
<td>1</td>
<td>2</td>
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<td></td>
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<td>3</td>
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<tr>
<td>Chrysanthemum (Chamanthi)</td>
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<td>4</td>
<td>2</td>
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</table>
For about 15 years, till about 1970's the local Telangana farmers had no ideas to innovate agriculture. Migrant large farmers, from Gujarat, Rajasthan, East and West Godavari (coastal Andhra Pradesh) initiated capitalistic, commercial cultivation here, with grapes.

Anab-e-shahe grape variety (1966-1977), Thompson seed less (1966), the formation of grape farmers association (1987-1988), and export campaigns, to inter-states (Karnataka, Maharastra) and to Middle East was the trend from the village. (A grape bunch weighing about 5 kgs, had bagged the first price, in horticultural show, in the 1965-70 period).

1992-95 is seeming the years of change, for massive disease of grapes (Powdery and downy mildew) in 1996, excessive heat and severe water shortage (1992-93), loss of farm labour, due to diversification (1992-96), the construction and zoning of the highway for trade (1972-96) to affect livelihoods and commerce.

From 1970's to 1990s, 60% of the prime agricultural lands were grape gardens, with about 1000 agricultural labourers than 10% of the major farmers were the Gujaratis from North-India, as early settlers.

Gandiah (70 years) with 40-45 years in pottery, recollects the decline in the availability of mud, pristine soils (black) - Banka matte, from 1986 to 1991 more so due to land conversions, allotment of 'Patta lands' to the landless poor, by the government and his 'no access' to the resource.

Kottur, a nearby village (10 kms) from Shapur, has enormously grown, in the last two decades in terms of 10-15 industries, decrease in grape cultivation, higher transactions of milk and agricultural product. The labour migrants from drought prone Mhubbunagar district, work under varied survival and skills for Rs 50/- to RS 80/- wage labour per day. This has influenced the work ethic and sociocultural patterns in Peddashaipur.

Parallel livelihood strategies of small and marginal farmers are in tailoring electrical wiring, hardware, shopping (Kirana) grocesory stores, money lending, self employed telephone booth owner, contractual factor worker, shoppetty worker, wage labourer (coolie), in peri urban zone, petty cloth merchants, as worker in hatcheries, as granite stone cutters, along with milk, fodder, organic manure and sell outs 30% of the village, still uses small scale "dried cow dung" fertilizer cooking in open hearths.
The nonavailability of water, increasing cost of fertilizers and inputs in rice; High labour availability and time, for grapes and input costs for grape and the shifting needs for labour requirements in cultivation transport and marketability (3 hours after picking, 2 hours by journey to secondary market nodes) in floriculture are prime attributable reasons for the transitions in livelihoods, in Peddashapur.

* The VASORD NGO attributes the reasons, A large exodus migration of labour to their native districts (Mahubnagar and Shadnagar) and to the Hyderabad city (1996), sell out of cattle and depletion of water are all indicators of ‘stress’ at Peddashapur.

* A grape research station was established in 1980, this had initiated the commercial interests in scaling up of grape cultivation here.

* During 1982 – 1990, the agricultural university faculty, used to frequent the village, for introduction of newer technologies, like irrigation (60% - 70% of large farms) in 1986; and towards the introduction of ‘Sona- Masuri’ and ‘Basmati’ rice of 150-180 days duration, ‘Hamsa’ (150-180 days) and ‘BPT’ (a 6 months rice variety of growth period 150-180 days. This was probably the time, when our old varieties were discarded.

* June to October end, is the peak season for harvesting jasmine (sanne – jagge or jivvi) and for large jasmine (malle or gundu jagge) it is February to May end.

* Gadde Rajasekher, a small farmer, with 20 years of experience in floriculture at Peddashapur states the severe water shortage’s during 1977- 1984, as well as 1993-95, disturbing about 1000 acres of land is the main reason for the shift to floriculture.

* Water tables were 30–50 ft (1970s), 70-90 ft (1971-77), 100 ft(1980-1990’s) 150ft (1993) and now still deeper.

Increased area in cultivation under floriculture market demands, industrialization and land sellouts, decreased ‘reliable’ agricultural labour have all in a way contributed to the present situation, in Peddashapur.

* The red, sandy loans were in early times, suited for Jowar, Sorghum (jowar), Castor, vegetables and the farmers were ignorant of fertilizers. Shapur, was under *the control of the pesticide manufacturing unit of as government in 1970’s and farmers were educated to use Mancozeb, Dithane, Ridomil as fungicides onto grapes.
* The cow dung source is from own fields, or stall feeding at homes.
* In floriculture for Jasmine; 20 women, including children are required for plucking flowers per acre. About 100-120 households of the margined are into floriculture wage labour on a daily basis. (Rs 10-12 for child-labour and Rs 15-16 for women)

* Both the marginalised and small farmers apparently draw from social relationships through CPRs, share cropping, seeking urban rural employment diverse activities may dispose their assets and participate in relief works.

**EXPERIENTIAL INDICATORS - PEDDASHAPUR**

-Small farmers are on a survival strategy and are adapting to daily livelihoods. They hold dual jobs as well. Rich farmers have the time, money and energy to innovate, if ever small farmers live by options of ‘ifs and buts’.

-Given the inherent low fertility of soils, erratic rainfall and the cost of investment in borepumps, lowering water table, erratic power supply (burning out of the electric circuit is a main problem in the village), the small and marginal farmers, depending on their circumstance, are switching from sorghum- rice subsistence to market economy (Floriculture)

**SURROGATIVE INDICATORS - PEDDASHAPUR**

-Since 1984, I recollect (per comm Prasad, VASORD, NGO) severe water depletion from 100 to 300 feet. This is a consequence of increased bore wells, by large and medium farmers small farmers with open wells, have been deprived of water access and forced to shift to other crops of subsistence and trade.

-The diversity of ‘Kharif’ crops as a set, predicts the opportunity towards options relevant to LEISA farming and as a niche opportunity (Jodha 1995).

-To day we have 40.50 acres under floriculture.

-The reason why floriculture switches are more lucrative than grape is cost of insecticide to fertilizer is 1:0, the labour intensity is 8:1, hence more labour wages.

-For smaller farming, sorghum(Jonna),(Coarse millets (Ragi, Taite & Sajje) and vegetables like tomatoes is the main stay of the food habits their.

-For farmers here-rain fed agriculture is a gamble of the mansoons.
- In the 1950's there was pristine Teak (500 acres) in the village.
- Peacock (Nemali), Deer(Hiran), Rabbits and small panther cubs were in the Kanchar gram pasture lands....permanent pastures existed till 1960s, on the other side of the village.
- We used to block the water, excess water of rains ,with brick pits (indicative of more water harvest)
- This was the prime 'mandal' (region) for grape supply to the city. Since 1986-87, Floricultural crops have been cultivated like Rose, Jasmine.
- I think, alternatives doesn't exist for agriculture, since new structures are in (nearby international air port proposal and sell-out of lands in the trend).
- In the 1950's there was 1200 acres of pasture land, which dwindled to 500 acres in the 1990's and to 200 acres in 1996.
- In 1987, there was 200 acres of horticultural crops, (grape) which increased to 300 acres in 1992 and due to severe drought, in 1997 is to the extent of 20 acres today.
- In early 1960's there was 100% use of Dung cake as farm yard manure in the village.
- In 1950's, we had types of scented paddy, including malkato, Jilkera (white, red) and thatapedlu (Local varieties) and yerra vadly, Nawab Passand, Zizamgouda and Dunnsarulu.(lost varieties according to insiders)
- In the period 1985-95 Thumma was excessively harvested for sale of wood and declined in number. Prior to that, we had rich black soils near the ponds. We have more than 2000 trees. During the same period, there was maximum 1000 bores struck in the fields.
- The soils were (with rice and grapes being grown) with high water holding capacity and heavy.
- Marginal and small farmers, have multi-livelihoods of wage labour, in other fields and are rural urban straddlers too.
**FIG. 8.4.1**

**FLORICULTURE-BASED, FALLOW LAND-REALITIES OF FARMERS**

**MARGINAL FARMERS (<2.5 ACRES)**

- Dung utilization (>70%)
- Rabi Sorghum (46%)
- Fallow (68%)
- Floriculture (40%)
- Rice + Floriculture + Vegetables (47.8%)

**SMALL FARMERS (2.5-5.0 ACRES)**

- Dung utilization (43.3%)
- Rabi winter sorghum (80%)
- Fallow (77.7%)
- Vegetables + Tomato (20%)
- Rice (20%)
- Floriculture (20%)

The above graph indicates diverse cropping patterns and adaptations of small and marginal farmers (25 households interviewed).

- There is 95% drop in grape cultivation today, in Peddashapur with a parallel sell out of barren lands, cultivation of small vegetables and the work force in Floriculture, due to constraints of water, labour, climate and increased cost of fertilizers, in that order.

'**We are lost as a farmer and have no faith in the government ....**'

*a local insider, (cultivator, since 20 years in grapes)*

- Today, in 1997, 98% of the trade is in Floriculture, taking all factors into consideration, for wage labour, finance and advances and the market forces is a new boom!

- About 40% are households of agricultural labourers and 30% are casual labourers who can work in 'odd' situations of granite/sand quarrying. Most of them are stone-cutters, working from 6.00-9.00am and 4.00 - 7.00 pm.

- Most of the farmers, have kerosene stoves, about 10% burn fire wood, in the village itself, and about 80% of the households have lighting.
-Given the mixed options of non availability of assured labour (flux), farmers are in different to work culture, and come for wage labour, at 10.30 – 11.00 am now. In early 1960's they would be in the fields at 6.00 am. (a seemingly realistic plight of large farmers employing the wage labour)

-The VAO explains an interesting case of official error in the government records. Surveys made in 1945 and 1954, are indicative of 900 acres of permanent pastures. Survey numbers 184 to 201 recording 665 acres has not been recorded. While again, after 1958 to date, there is no record of 456.32% acres. The VAO has represented the same to the government, but with no response. (per comm Dasaratha Rama Rao, VAO, Peddashapur / key informant)

-In 1975 there were 3 gardens in Floriculture, today (1996-97) we have about 73 gardens (plots) in Peddashapur.

-In 1990-91, six factories have been sanctioned, inside the village, with four in printing and dyeing and one in oil-extraction. We, had fought towards their 'non-clearance', in 1994 and it had culminated in their closure (the kanka dyeing factory and Gulab chand silk mill).

-The two main problems in the village are electricity and water availability.

-In 1975, we had 50 open wells and about 5 bore wells, in the 1990's the number of bore wells stuck were in the range of 80-100 and today, we have approximately 150 bore wells and no open wells.

-Achari, a wood cutter and blacksmith with a family lineage (20 years) in carpentry is marginalised today, due to dwindling demands for the traditional wooden plough (Nageli), the iron-embedded doors of the house holds in 1970's the cart-wood wheels for transport and agricultural wooden instruments. He is apprehensive about the future of the trees, the raw material for his trade, and views that Thumma and Vepa as the wood, now used, if ever, by the marginalised farmers would continue. His occupation, has collapsed to a two month period, due to fall in demands and changing priorities in the village.
In the early 1990's Vermicompost (1993) was first used and still in use in the large grape farms.

Today, we have a dwindled 5-6 pristine golla herders in Peddashapur there had been about 50-60 golla herders in the 1980's. The pastoralists graze around the common pond, small hillocks, the fallow lands, farm boundaries and near the railway tracks (per comm Golla Venkatesh, Golla Chowdaiah, Golla Kistiah, Parkanti Jangaih, Peddashapur). 'Goua' is the first name of the pastoralists in the region.

Before 1984, there was 200 acres of rice and today (1996) it is hardly 20 acres and ranges between 10-12 acres.

The 1996-97 Kharif (Rainy) entry from VAO register, indicates the Floriculture extends to 45 acres, Grapes (large farmer based) 30 acres (on the other side of the national highway 7), Rice 26 acres and sorghum 301.10 acres.

The tank – bed area, in the village was with earthworms in the 1970's - a fertile region, which now seems neglected, in the village.

'Reujaa' an enterprenuar, established the beginnings of co operative banking in the 1960's., and was the major force for assuring employment in terms of farm labour in grape - growing.

VASORD, the NGO has contributed towards

- Non formal education, to women (1986).
- Introduction of Thrift-credit system.
- Involvement of Raitu - Sangam (Farmer groups) for loans in agriculture, and cattle buying.
- Adult literacy and setting up of Vasavi Vidyalaya (Primary school).
- Biogas plant (1983) community based for fuel, manure
- 500 smokeless 'chullas' or cooking stoves (1987-1990)
**Perceptions of small farmers to present and future options in Peddashapur village**

* The linkage between small farmers and private entrepreneurs from Hyderabad, increase the options for economic security of agriculture (floriculture, nursery) and immediate hand loans and incentives, in terms of festival seasons and family obligations.

* Private entrepreneurs and large farmers are into the options and sell out of agricultural lands. The government is contemplating towards infrastructural development of the national highway 7, with the incoming proposal (sanctioned), of an International airport in Shamshabad mandal.

* The ‘edge effect’ and temporary stalling out of land sellouts is towards the possible hike in the price of land, in the short term (1 – 2 years). Private investments on infrastructure development again are perceived as negotiable with government.

* Small farmers (local) and entrepreneurs together are venturing into commercial small floral nurseries as well to catering towards biotech labs in the city.

* The economics and labour demands/returns are high on the small farmer livelihoods, in floriculture, with better standards of living (increased purchasing power towards fuel mixes)

* Small farmers conceive that Peddashapur village is poised for a brisk trade with industry, farmer entrepreneur linkages from the norms of the earlier commercial center for grape cultivation, towards the present floricultural boom.

* Developmental initiatives of newer market yards which involves 30 years lease to private entrepreneurs with cold storage facilities is on-going programme, linking people with the government (a positive factor). - a new government initiative.

* Youth and entrepreneur farmers perceive ‘newer entrants’ in place of NGO based projects.
TRADITIONAL AND TRANSITIONAL FLORICULTURE - PEDDASHAPUR
(Disaggregated entitlement mapping processes)

Fig. 8.4.2
# Seasonal Calendar - Peddaphur

## Index of Local Diversity

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<th>June</th>
<th>July</th>
<th>Aug</th>
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*Participatory oral testimony (1994-95)

*Fig. 8.4.3*
THE RESILIENCE AMONG FLORICULTURE SMALL FARMERS
Floricultural Transitions, the genesis of Industrial Agriculture,
Survival Strategies of Partnerships and Stakeholders in Transition

Risk Abatement
Traditional Dry crop farming (Sorghum)

-Industrial Employment
(non-option) or contractual farming

Economics & Labour
Demands & Returns
are High

Moveout options into
alternative agriculture trends
Better purchasing power
for alternative fuels
Energetics of Floriculture
Trade is high
Entrepreuner Partnership
for 'Floral nurseries' for
Biotech labs

Small Farmers

-Capitalist Money inflow
for package deal including Drip-Irrigation

Private enterpreuners
and market

-Demand for Floriculture
transitions
-Security for agriculture
monetary arranged
-Sanction loans for all
purposes
-Transits for harvest
arranged

Create Transitional work
opportunities (Labour,
contractual)
-Infrastructure
development of roads &
complexes, with Private
investments
(Edge-effect at
periphery of village)

Cold storage facilities in
Market yards on lease

Newer
linkages

State
Government

Large Farmers

Further options, in Peddahapur village, is evolving and enterpreuner – based, with FEN entitlement exchanges, in rural-urban transitions, both large and small farmers.

Could we say that all the above, are lines of closing the gaps, between FEN, and are themselves, farmer prioritized, changing, self-propelled, synergistic solutions for food security, livelihood coping under stress and soft-options on their energy-entitlement exchange routes?

Fig – 8.4.4
THE 'FUZZINESS' OF FUZZ - A LEARNING EXPERIENCE

The participatory evidences as 'indicators' in Peddeshapur village, at the centre of the non-equilibrium ecology- vortex, implicates, that taken together, the fragments of evidences, demonstrate that 'true' participation, cannot be captured, in a one-for-all format, despite criticism from donors, for not giving the full-picture of the issues and for, endusers (the researcher?) wasting their time, on unimportant matters (Hammeeijer et al 1999). The case-study concludes that the learning experiences of the insiders' perceptions suggest that, further agendas for interactions need perceive such rocky terrains of fuzziness, or more simply, understand the complexities, with flexibilities, than rushing into - as the evidence of the failure of the VASORD - NGO, in a certain pocket, of the community. (more to Biomass energy by installing - Biogas plants and less towards the unknown?)

The reality of depletion of water-tables and the tandem shifts and 'invisible' processes of change of the communities towards 'survival', 'coping with drought and uncertainty' as well as the new Floriculture based livelihoods was missed out by the NGO. This, has again reinstated the reality of entitlement-exchanges, towards energy for livelihoods (human energy into survival and accumulated strategies), through the messy matrices (evidence) and institutional dynamics, on the disaggregated mapping processes. Atleast there seems some hope towards knowing the realities of the insiders through the complex web of uncertainties, by seeking through their indicators! so that revisiting the terrain, in time and space, with interventions/future options, remains a reality, to add to their livelihoods. Youth entrepreunerships, was the best learning experience.
THE ETHBARPALLE VILLAGE

Whose knowledge counts?
Whose values?
Whose criteria and preferences?
Whose appraisal, analysis and planning?
Whose action?
Whose monitoring and evaluation?
Whose learning?
Whose empowerment?
Whose ‘reality’ counts?
‘Ours’ or ‘Theirs’

R. Chambers, 1997
Whose reality counts? Putting the last first
8.5 THE ETHBARPALLE VILLAGE

SEARCHING THROUGH INDICATORS
THE CASE STUDY OF RISK AVERSION STRATEGIES OF SMALL
FARMING ± PASTORALISM COMMUNITIES

Introduction

Ethbarpalle, is a typical, traditional village in the Deccan plateau, Semi-Arid, peri-urban fringe, located along the south west of the metropolitan Hyderabad city. The village is located in the Moinabad revenue mandal, approximately 47 Kms, from the Hyderabad meteorological station. The nearest National Highway, for transit is the Hyderabad – Vikarabad – Tandur – Bijapur – Bombay road. Enroute, the road meanders through the Mrugavani National Deer Park, Chilkur and bypasses the natural waterbodies of Osmansagar and Himayatsagar (the nomadic abodes of the transpastoralists from Ethbarpalle, during the summer months of April-May) which are the tributaries of the River Musi, of the Hyderabad state.

The small and marginal farm families, (>80%), cultivate the principal crops – Sorghum (Jonna) for food security, Tomato (for market economy), and practice mixed farming. The crop and tree diversity, integrated crop and livestock in their farming systems, are a part of their traditional lineage of peasant pastoralism. IRDS (Integrated Rural Development Services) is one of the largest NGO, networking in the Rangareddy district, operating in the peri-urban fringes of Hyderabad. Within the administrative boundary of Moinabad, the NGO has been operating in Ethbarpalle and its neighbouring villages (Kettereddypalle, and Nakkalpalli as well as Tolkatta, -2 kms away from Ethbarpalle) since a decade.

Ethbarpalle village, was chosen as a study area, by a participatory evaluation, mediated by SSI with the local and semi resident NGO – the stakeholders. (This was facilitated, by residential training, and in 1995-96, when the objectives of the research, was in the formative stage, and shared with the NGO) To date, IRDS, has not ventured into the farming livelihoods and into the realms of newer opportunities, in the peri-urban fringe. Since 1985, they have focussed on education, credit - facilities and housing for the marginalised communities in the village (capacity building). The NGO felt that, any entry, with newer partners and stakeholders can help them, to negotiate their priorities, towards, empowerment of the local communities, conservation of the natural resources, niche opportunities and diversification of the small farming livelihoods, under peri-urban transitions and seek towards training and learning of participation’s skills, of their own, local resident employees (A PRA exercise, has not been attempted, prior to the researches links with the NGO).
Since mid 1990's, girdling on the peri-urban fringes of Hyderabad, there is an upsurge of private farm-houses, resorts and leisure investments, more so along the Osmansagar and Himayatsagar lake roads. Multi-nationals, city-elites and private entrepreneurs have flaunted these initiatives. This is seemingly a growing reality, on the peri-urban fringe, for leisure options, to the urbanites. Common sightings, are vividly captured, 5-15 Kms, from the Ethbarpalle village, specifically alongside the interior landscapes and the National Highway, by the local communities too. Labour employment in farm houses is a new reality, for them. The expansive peri-urban fringe of the metropolitan is perceived as an opportunity by most of the small-entrepreneurs farmers, initiating their shifts to market-oriented tomato trade, at Ethbarpalle village.

The Meso-institutional Framework: IRDS, the local NGO

The IRDS (1995a; 1995b) aims at

* Improving the quality of life of the weaker sections of the society, at Ethbarpalle.
* Improving literacy and socio-environmental perceptions
* Pre-school, Adult, and Functional education
* Involvement of people in formulation and implementation of the developmental work with the acceptance of pro-women, pro-poor, towards self reliance, access control and share of the resources
* Facilitating to liaison with government programmes
* Initiating research activities, to understand rural dynamics and understand strategies for rural transformation, towards social justice, employment opportunity and decision making.

* The broad themes on which IRDS is focussed at Ethbarpalle village are women and youth, child education, street-children (who are rehabilitated from urban nodes, in their centre), combating child labour and literacy at the urban and rural areas.

* The target groups of IRDS, since 1985, have been landless labour, marginal farmers (tenants or sharecroppers), rural artisans (potters, weavers), quarry workers (contract or migrant stone cutters), child labour, street-children, School going children, school drop-outs, women (or poor and marginalised families), youth and unemployed youth.
IRDS, since a decade, has experienced the reality of transitions (IRDS 1995a; 1995b) with the welfare approach (as outreach programmes) to build bridges and again credence among the communities; the development approach-'a change brought forward, by intervention in the socioeconomic life of the beneficiaries' – through awareness and participation; through their social-action group approach – of participation, in the continuum and encountering struggles and conflicts as well as the consultative network approach, advocacy and liaison services, which can help donor agencies and voluntary NGOs.

The Rationale

The IRDS is premised on the rationale (IRDS 1995a, 1995b) that each community and client group is distinctive and need an approach, to meet these divergencies. It seeks out differing perceptions, concepts and strategies, which tend to be experimented and persuaded, each one contributing in their own way, to take multivariant issues. It recognizes the process of development as a means, rather than an end itself. The emphasis is on 'processes' by which the resultant opportunities are achieved. (by increasing the opportunities of the previously exploited and excluded groups to participate more fully, in the developmental process, to achieve the goals of empowerment).

* The strongest bondage of IRDS with the village is the employment force of 'locals' on a permanent basis; networking with inter-and intra-village IRDS members and now established a local Training school (1994) with a parallel nodal center at Moinabad (1995)- (this has been alongside to the entry of the researcher into the arena).

The 'Thrift and credit' programme and 'Sangams'

'Sangam', as perceived by IRDS is a primary group or beneficiary composed of socially – economically neglected population of the village. They are heterogeneous, but have a common role of lobbying and liaison with the government, voluntary agencies, banks, employees and other institutions, for promotion of their welfare. Their strategies and success is to a large extent, determined, by the IRDS and associated groups, who direct the process.

The sangam has a Thrift and Credit programme, as its major thrust. It is an 'informal sector' which is realistically functional at Ethbarpalle.
"Non-institutional credit sources, as more powerful, less documented and the informal sector too is becoming institutionalized now".

(Sukumar David, IRDS.)

The people's local perception is:

* It is an 'indigenous form of saving and credit', different from formal banking sectors (commercial banks, regional rural banks) and the cooperative sectors (land mortgage, developmental banks and cooperative banks).
* IRDS recognizes the growing need of our small credit, for emergency (a) consumption purpose (b) commercial initiatives for income generation of families.
* The credit is normal readily available, with no guarantee. Again, at short notice, without much questioning.
* The terms of repayment, are often easy, according to the abilities and convenience of the insiders.
* We, liason with IRDS through friends, neighbors and relatives (who were the earlier sources of credit, in our lives).
* The big step (towards confidence building) undertaken by IRDS in Ethbarpalle is 'Housing' (in 1995)- the shelter initiative, for the marginalised, through thrift and credit, is apparently in line with 'building peoples' capabilities, along with earlier initiatives towards different target groups.

The reasons, why the target groups, have lost interest in formal institutions, despite the fact, that under changing political conditions, they might possibly be waiver of loans earlier taken ('malfidars' as an institution), by the government, are:

"Formal sources are cumbersome, time-consuming, though the interest rate is relatively low, The accumulated interest and again acquisition procedures are too harsh for the powerless poor, who fall into the debt trap."

Sukumar David
IRDS, Director

The peoples reality towards 'Thrift and credit' is that:

"We get small handloans, from merchant associations, chit funds, caste associations, religious associations, NGO run self-help groups, and large farmers (patels), for contingencies like marriage, education and funeral".
Towards empowerment the 'modus operandi':-

It is a coincidence, that IRDS was formed, at the time when the term or concept of empowerment, had come in vogue, by voluntary organizations. The 'Integrated development approach', of the organization perceives that, the strategy is emerging, and not based on any ideology (IRDS b) and there is no well knitted design for empowerment.

The term 'empowerment' in the context of IRDS indicates:

* 'Gaining control over material (low wages, land reclamation, farm implements, credit and saving, water and sanitation, housing) and non-material (education, health, training and networking) resources of the individual and groups of rural poor, through the process of 'education', collective and participatory decisions, making choices of programmes and activities, for enhancing socioeconomic, political and environmental advancement or change (IRDSb).

"We are not for power takeover, by the poor. There should be no culture of conflict or crisis. IRDS is for improved well-being and the holistic individual, for a humane and environmentally safe custody, for all". (per. comm. Sukumar David, IRDS)

The empowerment strategies, aims at unifying the forces of variations towards maximizing the potentialities, in shaping the status, by changing the conditions by

(a) Working and living with the poorest and oppressed, in the urban (street children, labour communities) and the rural homes, with the focus on rural livelihoods

(b) A 'forum' to be together (one week to 10 days) so as to (i) expand the horizons of access, to the poor and target group, for newer knowledge and skill learning (ii) encourage training of leaders, in small trades like stitching, poultry keeping, vegetable vending, small employees in trade and hotels, here again, the capacity building is emphasized.

The inventory of participatory appraisal with the NGO, insiders under various circumstances, of the research, on a continuum could reveal the human perceptions of the NGO initiatives, in the Ethbarpalle. (researchers' experience, of staying along in the nodal centers along with the village NGO insiders).
**TABLE - 8.5.1**

<table>
<thead>
<tr>
<th><strong>IRDS INITIATIVES &amp; EMERGING PERCEPTIONS IN ETHBARPALLE VILLAGE</strong></th>
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<tbody>
<tr>
<td><strong>How does IRDS contribute to capacity building?</strong></td>
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<tr>
<td>* Adult &amp; functional literacy, through pre-schools/night schools, from 1985 to date</td>
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<td>* Balwadi programme aimed at pre-school education for children to eliminate ‘illiteracy’</td>
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<td><strong>What are the advantages of the ‘Mahila sangam’ Thrift and credit society?</strong></td>
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<td>* Finance for consumption or investment in commercial self-help initiatives</td>
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<td>* Encourages saving, according to ability of members</td>
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<td>* Credit without guarantee</td>
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<td>* Available at short notice</td>
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<td>* Available for emergencies (Crop failures, death relief, new enterprises)</td>
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<td>* Given without much questioning, time of repayment is easy, and most importantly negotiable, according to the abilities and convenience</td>
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<td>* Loans at low/zero interest rates.</td>
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<td><strong>What has IRDS done to the people, today?</strong></td>
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<td>* The on going Rural Housing schemes.</td>
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<td>* The established water access (1998) to the village</td>
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<td><strong>Into what fields is IRDS emerging to contribute?</strong></td>
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<td>* Co-operative marketing of agricultural produce to eliminate middlemen</td>
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<td>* Organic farming &amp; LEISA</td>
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<td>* Training and education in vocational agriculture and rural development</td>
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<td>* Networking with urban centers in eco development</td>
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</table>

**What have been the previous achievements in the village through IRDS?**

- Mahila sangam’s pounding machines for chilly and turmeric;
- Flour mills
- Co-operative agricultural loans including goat rearing and dairy cum vegetable vending individual loans) to the maximum of Rs 3000/-

**Local IRDS employees: perceptions towards PRA/RRA exercises in the research investigation:***

- Involvement and prioritising local needs (their reality counts!)
- Horizontal transfer of PRA/RRA to neighbouring villages, with focus of IRDS objectives
- On-going, ‘interaction’ and link-up with Loyola Academy Vocational Training/Education. -a possibility (?)
The approach towards issues, in Ethbarpalle, was by involving the local - NGO - insiders, towards participators monitoring of the communities and asking them to plan and choose the reason, being, IRDS, has not directly addressed to their farming livelihoods, to date. The themes were deciphered, by naturalistic inquiry and investigation, due to more responsive, participators and inclusive approaches of sharing.

**The grass root indicators**

<table>
<thead>
<tr>
<th>Themes</th>
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<tbody>
<tr>
<td>* Farmers' risk aversion strategies.</td>
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<tr>
<td>* Seasonal calendar at Ethbarpalle.</td>
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<tr>
<td>* Pastoral - peasants' knowledge-base in mapping Bioresource flows.</td>
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<tr>
<td>* Farmers' rationale for shift of cultivation from cotton to market oriented tomato.</td>
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<tr>
<td>* Indicators of Transience (Small farmers - Tomato growers)</td>
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**The surrogative indicators**

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<th>Themes</th>
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<td>* Participatory check listing on tree diversity.</td>
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<td>* Participatory selection of village micro determinants for IRDS - insiders and outsiders objectives.</td>
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<tr>
<td>* Oral testimony - reasons for herders' dwindling herd size.</td>
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**Experiential indicators**

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<td>* Unni carpet weaving as a livelihood</td>
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<td>* Community herding as a livelihood and transpastoralisation</td>
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<td>* Tomato trade of marginalised communities - transience and economies</td>
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</tbody>
</table>
In Etharbarpalle, there is no evidence of family migration, since all the households are in farming. The economic returns of sheep / goat manure sell out to the neighbouring villages is an important asset building strategy. The peasant agricultural systems, have the total inputs of human energy into their livelihood. Despite the fact, that the incoming accrued is minimal, the highest stability and productivity of the soil, is the farmer’s criterion. Penning, integrated use of sorghum and fodder gross mixtures, high incidence of earth worms in soils, high transit fodder manure among the farmers, maximization of income, structural adjustments towards labour and own sources of natural fertilizers to the maximum extent are indicators of farmer autonomy, solidarity intensification, communication and ecological rehabilitation if warranted.

**TABLE-8.5.2**

*The farmers' risk aversion strategies in Etharpalle are as follows:*

* Family migration is absent.
* Sorghum and fodder grass mixes are used as feeder for livestock.
* Fodder manure barter and exchanges is common.
* Entire household is in farming (maximum human inputs).
* Local penning in fields is encouraged.
* Sheep/goat manure sell out (to neighbouring villages) is an economic asset building strategy.
* Farmer network and seek advice 'informally ' on seeds, plant protection and veterinary services.
* Diversification of entire farming system is practiced due to inherent fertility of black soils.
* Crop mulching, crop rotation, application of organic manure, than purchase of fertilizers is the norm.
* Minor adjustments, by sell outs of goats/sheep occurs, but no land sell outs.
RISK AVERSION STRATEGIES AND STABILITY OF THE SYSTEM

INSIDERS' HOLISTIC APPROACH TO FARMING

* Employment in farmhouses (parallel to own farming)
* NGO linkages with farmers (housing, shelter loans, thrift and credit and night school education for women)
* High biomass base, optimal irrigation, commercial impetus towards vegetables and fruit marketing.
* Alternatives is in NGO linked agricultural networking in the local area.
* Labour productivity of entire farming system is high (small farm diversity)
* Sustainance of crop yields over time is high
* Energy for Post Harvest Trade is highest, crop-intensive and market driven.
* Optimum use of local resources and low external input availability.
  (the above is viewed as a precondition for newer opportunities and intensification)
* Options for agro forestry, high cyclic returns is possible.
* Commericals inputs exists for vegetables and fruit marketing
* Minor adjustements-disposal of assettes, goat, poultry, Barter of goods, no land sell outs
* Household energy demands are dictated by
  a) Crop intensification  b) Market driven strategies (male)

PASTORAL – PEASANTS’ KNOWLEDGE-BASE IN MAPPING BIORESOURCE FLOWS

The beginnings of the insiders’ knowledge of ‘bioresource flows’ is evident, from the drawings of the pastoral peasants in Ethbarpalle.

* Diversity of crops, include pulses, dry sorghum, Tomato, Carrot Rice, and oil seeds. The fodder stalks, which remains, is fed to the cattle.
* Tomato is cultivated, for a period of 4 months (November to February) for the market.
* The women and children harvest carrot and tomato
* Goat/Sheep manure is an input, into the fields.
* Organic manure (Cowdung) heaped, with 10 cartloads/year is the input into their farms.
SEASONAL CALENDAR - ETHBARPALLY*
(INDEX OF LOCAL DIVERSITY)

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* Participatory oral testimony (1994-95)

Fig. 8.5.1
BIORESOURCE FLOW IN A MIXED HERDER'S TOMATO FARM-ETHBARPALLE

Market (Cotton Boll) → Stalks → Cotton, Pulse, Aster*, Rice → Beetroot Carrot → Threshing and Mulching Pit → Organic Manure, Livestock

Organic Manure → Safflower, Sheep penning → Tomato Cultivation Beetroot, Carrot → Market

( * Own - traditional seed multiplication )

Fig - 8.5.2
* Hen's manure (procured from surrounding farm houses with poultry), through sharing (half a truck load costs Rs. 2000/-) is the organic input, into the farms.

* Traditional seeds of Rice, Pulses, White coarse Cereals, and white safflower are used, because, it still does not lead to contamination and disease.

* Safflower seeds are sent out to the oil mill for seed extraction and processing.

* Transitions (cotton to diverse crops) are evident, on the black soil tracts and more common with pastoral peasants, who are entrepreneurs, in the village.

* The natural resources, access, value in monetary terms, the geographic extent, the soil type, texture, water resources, enterprise additions of crops, vegetables, Tree, Fodder, Livestock, are perceived by the local pastoral peasants.

* The flows and enterprises, as components for integration, as indicated by the insider-NGO and the Pastoral peasants reveal surrogative indicators of
  a) Diversity
  b) The number of bioresource flow loops
  c) Biomass production (capacity /kgs) and
  d) economic efficiency ratio (Profit : cost) being perceived by the farmer.

The first attempts, towards gauging their knowledge, indicates that future rehabilitation and integrations might possibly exist, through an integrated approach to the farming system, by the NGO, Insider-NGO and the researcher. Thus four way diagrams or kite diagrams, indicating diversity(number), recycling loops (number), capacity (in kgs) and economic efficiency (profit :cost ratio) can be evaluated, for each enterprise (Lightfoot et al 1991)

**Farmers’ rationale for shift of cultivation from cotton to market oriented tomato.**

*(as per priority ranking, mentioned in brackets)*

Farmers in the early 1990s were cultivating cotton because of high yield and returns (1), initial investment was less (2), They had no other alternative for the market economy (3), and the residual moisture in the black soil was suitable for the cultivation of cotton.

The changing priorities of the small farmers in 1998-1999 to market oriented tomato was due to the following reasons: Credit facilities by banks, cooperatives with relation to cotton had come down (1) and the government has now increased credit facilities for infrastructure development in the peri-urban fringes for Horticulture, Floriculture and Commercial Agriculture(2)
Cotton was abandoned during 1994-1995 due to

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Change in the government Policy reasons</th>
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<tbody>
<tr>
<td>* Loss incurred by boll worm attack</td>
<td>* mass suicide of cotton farmers in Andhra Pradesh state (in neighbouring districts) due to debts and links to high dependence on pesticide purchase. (per. comm. Dr. Gopal, CEC)</td>
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<td>* dealing with middlemen and financial institutions was difficult</td>
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<td>* Farmers recognize linkages between traders, and politicians for market and viewed cotton as big farmer proposition</td>
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<td>* There were no cotton buyers of the local variety</td>
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<td>* High price of fertilizers</td>
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</tbody>
</table>

The surrogate indicators:

* The local farmers and elders in Ethbarpalle, can recognize and orally recollect the multiple uses of trees which are an integral part of their farm lands. This is evident from the participatory check listing of the tree biodiversity in Ethbarpalle.

* The participatory selection exercise towards the microdeterminants of the village by the IRDS-insiders is indicative of their traditional knowledge and adaptability to diverse niches.

* The oral testimony of the herders' dwindling herd size towards is as follows:

  - From a herd size of 300 (1993-95) it has dwindling to 60 (1997) and now to 30 (1998), the reasons being
  1. Drying of the fields, all around
  2. Partial mobility to neighbouring villages of Tolkatta & Nakkalapalle due to fencing
  3. 90% mortality in 2 months due to diseases. The 'Borra' disease is due to liverflukes which is present on wet fodder grass, during November-December. The herders recollect that the disease has come in 1986-87 and still continues. The 'Gonto vapa' accumulation of water in the throat is common in the herds. For which they give neem extract and milk as medicine.
<table>
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<tr>
<th><strong>The NGO needs</strong></th>
<th><strong>Insiders and researcher’s perspective</strong></th>
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</thead>
<tbody>
<tr>
<td>* To involve the local, resident NGO’s in appraisal, for a quick, base-line inventory of the village.</td>
<td>* Resource poor, small farming communities with own lands (&gt;90%) and less of agricultural labour employment</td>
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<td>* There has been no knowledge of PRA/RRA to the employees to date</td>
<td>* People’s participation, by co-operation, Adaptation and Traditional knowledge is apparently high</td>
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<td>* Interests in organic farming LEISA (Low -external input sustainable agriculture) in terms of capacity building, due to local ownership of landscape</td>
<td>* Risk- minimizing crop intensification, and diversification is a positive factor</td>
</tr>
<tr>
<td>* Interest in linkages to markets, acting as entrepreneur and elimination of middle-men in trade</td>
<td>* Village local ecology has natural endowments of trees and crop diversity</td>
</tr>
<tr>
<td>* Opportunity towards first ecological approach, to their programmes</td>
<td>* Traditional practices such as multi-cropping, organic manure use, crop-rotation is high</td>
</tr>
<tr>
<td>* A viable option to link to vocational education, job employment, in the villages.</td>
<td>* Key informants and NGO employed farmers (insiders) are available and accessible (residential)</td>
</tr>
<tr>
<td>* Recognition of newer linkages to AME, Bangalore &amp; MSSCSARD, Chennai and newer possible emergent partners.</td>
<td>* Farm livelihoods are more into long term stability, rather than maximizing yields.</td>
</tr>
<tr>
<td>* To date, IRDS has not ventured into farming livelihoods and community initiatives, in the participatory mode.</td>
<td>* Small village, with high integrity</td>
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<td></td>
<td>* Potential vocational (terminal) education and job opportunities of the locals, by admission into the Jesuit college and/or following up by the Department of Farm Science.(term visits and residential stay)</td>
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### TABLE-8.5.6

Determinants and associated Indicators of peri-urban Vulnerability and well-being 
at different levels in Ethbarpalle Village

<table>
<thead>
<tr>
<th>INDIVIDUAL LEVEL</th>
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</table>
| Access to adequate nutrition and health care, primary health care. | • Traditional ‘Telangamp’ food habits with Sorghum (Jonna) leavened bread, pulses, rice and ingredients evident.  
• Fortnightly visit by doctor to village is optional, Under any casualty / emergency, they migrate to Kettereddy palle or Maimabad. Primary health care is a lacuna.  
• There is the existence of a primary government school children, attend school regularly, with parent negotiated access to farm-work, or collection of organic manure, fodder, transit of food, cattle grazing and participation in harvesting of produce.  
• Diversification of individual fields, with crop suitable for ‘ Kharif’ (Rainy) season and rabi (winter) season. Commodification of organic manures, fodder, milk and agricultural produce, at neighbouring villages, or secondary market nodes or to farm houses. Multiple product market trade is the norm, among the small farmers.  
| Access to adequate education                          | (a) Pastoral-peasants, further intensify production, by bio-resource cycling and sell organic manures (goat and sheep),  
(b) Trans-pastoralists-sell goat and sheep (in transit), under ‘stress and drought conditions’ and simultaneously seek ‘wage labour’ constructions on day to day basis in cities, from their secondary herding nodes or water points (Osmansagar and Himayatsagar lakes). Sand-quarrying, is prioritised.  
(c) Unni-carpet weavers, seasonally weave the carpet -wool and negotiate ‘informal’ trade links, through the system of (a) and (b). Sorghum fodder sale, by informal networks, may be a source of income. Localized penning, in the open, but make-shifts fencing, enables sale-points for goat/sheep manure, to large farmers and farm houses.  
| Access to adequate income I                          | (a) Pastoral-peasants, further intensify production, by bio-resource cycling and sell organic manures (goat and sheep),  
(b) Trans-pastoralists-sell goat and sheep (in transit), under ‘stress and drought conditions’ and simultaneously seek ‘wage labour’ constructions on day to day basis in cities, from their secondary herding nodes or water points (Osmansagar and Himayatsagar lakes). Sand-quarrying, is prioritised.  
(c) Unni-carpet weavers, seasonally weave the carpet -wool and negotiate ‘informal’ trade links, through the system of (a) and (b). Sorghum fodder sale, by informal networks, may be a source of income. Localized penning, in the open, but make-shifts fencing, enables sale-points for goat/sheep manure, to large farmers and farm houses.  
| Access to credit I                                   | Women are members of IRDS who negotiate credit and the local thrift society.  

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<table>
<thead>
<tr>
<th>HOUSEHOLD LEVEL</th>
<th>Individual loans are negotiable and sanctioned through IRDS</th>
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<tbody>
<tr>
<td>Household type</td>
<td>- Pastoralists-fall short of expectations of credit, because the women are sedentary, by nature. Informal household credits is the norm, by customary lineage.</td>
</tr>
<tr>
<td>(Migrant, landless community) and household structure and access to basic facilities (water, sanitation, rations, landuse)</td>
<td>- Both the Tomato-Trade farmers and pastoralists (unni-carpet weavers) on an individual basis, suggest that credit facility is priority and addressed, partially. They feel that IRDS can focus on agricultural credit and advance loans for carpet-trade. However, clarity on issues is the bottleneck', in terms of positive initiatives by IRDS. This is so due to possible diversification from the real issues.</td>
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<tr>
<td>II</td>
<td>- Tiled, mud-cemented, with open-space for tomato-harvest operations; stall feeding and accumulated fuel and cowdung cakes is common; Fuel stacking is seasonal; single kitchen, with one window ventilation common; open-hearth cooking optional; kerosene stoves an increasing trend in houses, as a safety net; simple traditional cooking present.</td>
</tr>
<tr>
<td>COMMUNITY LEVEL</td>
<td>- Tiled, mud-cemented; open-hearth cooking common; No fuel stacking; Nearest access to sorghum fodder stalks; simple traditional cooking.</td>
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<tr>
<td>Access to housing and community access to basic needs (I &amp; II)</td>
<td>- Access to water, is by a new line, for both the communities, which utilize bore-pumps (government-installed, common access). Sanitation is open access. Rations are the source for sugar and kerosene.</td>
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<tr>
<td>Safety nets</td>
<td>- Access to housing is prioritised and IRDS is on ‘capacity-building’ by loan sanctions and construction of cemented ‘pucca’ households for the women-based and other communities.</td>
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<td></td>
<td>- Foods, fuel and fodder sources are local and can accumulate by barter or small trade.</td>
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<td>- Inclusiveness of manure, milk, fodder, linkages between pastoralists and small farmers.</td>
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<td>- Emergency loan sanctions for all (with informal networking), by IRDS- as an ‘open’ opportunity.</td>
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**Key:**
I. Tomato and mixed farmers
II. Pastoralists-Peasant and transpastoralists
## Table - 8.5.4
### Tree Inventory - Ethbarpalle

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<th>Tree Name</th>
<th>Fruit</th>
<th>Fuel</th>
<th>Fodder</th>
<th>Pole</th>
<th>Shade</th>
<th>Med</th>
<th>Ag tools</th>
<th>Houses</th>
<th>Farm</th>
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<td>46.</td>
<td>Kakinerela chettu</td>
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<td>+</td>
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<tr>
<td>48.</td>
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<td>-</td>
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<td>+</td>
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<tr>
<td>49.</td>
<td>Dhanimma</td>
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<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
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<td>Ashoka</td>
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<td>51.</td>
<td>Subade</td>
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<td>-</td>
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<td>+</td>
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<td>-</td>
<td>+</td>
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<td>+</td>
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<td>Medi</td>
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<td>+</td>
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<td>54.</td>
<td>Sarkaru thumma</td>
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<td>-</td>
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<td>Borugu</td>
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<td>56.</td>
<td>Gangaregu</td>
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<td>+</td>
<td>-</td>
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<td>57.</td>
<td>Ussiri</td>
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<td>+</td>
<td>-</td>
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<td>58.</td>
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<td>+</td>
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<td>59.</td>
<td>Chennangi</td>
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<td>+</td>
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<tr>
<td>61.</td>
<td>Eveti. bambu</td>
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<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
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</tr>
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</table>

(PRA with Tomato growers)
<table>
<thead>
<tr>
<th>No.</th>
<th>Species</th>
<th>No.</th>
<th>Species</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tamarindus indica</td>
<td>28.</td>
<td>Sapindus emarginatus</td>
</tr>
<tr>
<td>3.</td>
<td>Cassia fistula</td>
<td>30.</td>
<td>Streblus asper</td>
</tr>
<tr>
<td>4.</td>
<td>Acacia leucophloea</td>
<td>31.</td>
<td>Butea frondosa</td>
</tr>
<tr>
<td>5.</td>
<td>Cassia auriculata</td>
<td>32.</td>
<td>Semecarpus anacarblim</td>
</tr>
<tr>
<td>6.</td>
<td>Rialla spps</td>
<td>33.</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>-</td>
<td>34.</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Azadirata indica</td>
<td>35.</td>
<td>Acacia arabica</td>
</tr>
<tr>
<td>10.</td>
<td>Ficus bengalensis</td>
<td>37.</td>
<td>Prosopsis spicigera</td>
</tr>
<tr>
<td>11.</td>
<td>Ximenia americana</td>
<td>38.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td></td>
<td>40.</td>
<td>Punica granata</td>
</tr>
<tr>
<td>15.</td>
<td></td>
<td>42.</td>
<td>Diospyros melanoxlon</td>
</tr>
<tr>
<td>17.</td>
<td>Holoptelis integrifolia</td>
<td>44.</td>
<td>Prosopsis spps.</td>
</tr>
<tr>
<td>18.</td>
<td>Mangifera indica</td>
<td>45.</td>
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</tr>
<tr>
<td>19.</td>
<td></td>
<td>46.</td>
<td>Emblica spps.</td>
</tr>
<tr>
<td>20.</td>
<td>Pongamia glabra</td>
<td>47.</td>
<td>Ficus infectoria</td>
</tr>
<tr>
<td>22.</td>
<td>Cocos nucifera</td>
<td>49.</td>
<td>Tectona grandis</td>
</tr>
<tr>
<td>23.</td>
<td>Ficus infectoria</td>
<td>50.</td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Randia dumetorum</td>
<td>51.</td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td></td>
<td>52.</td>
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<td>26.</td>
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<td>27.</td>
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<td>28.</td>
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<td>29.</td>
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<td>30.</td>
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<td>32.</td>
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<td>33.</td>
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<tr>
<td>34.</td>
<td></td>
<td>61.</td>
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</tr>
</tbody>
</table>

(columns which are blank could not be identified in the local forest flora, which has a telugu dialect)
Every 6 months an average of 4 goats are sold, with a peak during the *Ramzan* muslim festival at the local slaughter house (10 kms) at the rate of Rs. 400-500 each. Seasonal calving is one per year. The herds are preferred to be in the mixed age group of 1-5 years.

**EXPERIENTIAL INDICATORS**

**CARPET WEAVING (UNNI / GUNGADI) AS A LIVELIHOOD AMONG PASTORALISTS**

(25 households)

‘Unni’ is a traditional blanket, made from the wool, derived from the local female sheep skin. The Deccani, sheep breed is sheared for its fleece which is coarse, hairy and open for carpet making (Acharya 1992) The ‘Unni’ weavers, in the Telangana area, are an indigenous tribe and their livelihoods are in blanket making and small marginal dry farming. Historically, in the Ethbarpalle village, there were 25-30 Families (in early 1990s) and the elders recall, the deteriorating trend with 15-18 Families today, under livelihood threat, due to

* lack of Government bank subsidies
* options towards a repayment facility, through bank
* need for a second Government loan for such cottage industry
* lack of marketing channel and demands
* need for encouragement of their subsistence livelihood

‘Unni’ carpet weaving is an intensive family-based small-scale cottage activity. Carpet weaving is a seasonal six-month activity, during summer, in preparation for the cold season. The uni-blanket, is traditionally worn as a blanket-cover by the local villagers, during the winter-rainy seasons. Unni blanket weaving is labour-intensive, family-based and the occupational hazards are long-hours of sitting in a fixed posture and weaving the threads manually. Backaches, body ache and hand pricks corns on the hand are evident, among the workers. There is excessive use of the shoulder, arms and the weavers complain of a chest pain/heart-paint, on several occasions:

The peak activities are from ‘Sankranti’ (the month of seasonal crop-harvest of the previous ‘Kharif’ Season) to ‘Murgasera’ (the local calendar)

The carpet weaving activity begins, by initially shaving or cutting of the hair or wool from the sheep; the separation of the unni-fibers or threads; Thin shredding and threading into 500-600 spins of an uniform length of 12 inches and thickness of 6 inches, a moderate
PLATE XVI

ETHBARPALLE

UNNI CARPET WEAVING AS A LIVELIHOOD
work, done by women and dipping the ball of wool, in to a pulp of vegetable origin (Tamarindus spp). The seed-pulp of Tamarind (locally termed as chintaginja) converts the texture of the wool, initially to a soft material.

The thread-making process or hand-weaving, is performed by the woman, for a period of one month, working at 5 hours/day parallel to her household chores. The threads are wooled into balls.

The wound ball, is simultaneously extended onto a wooden weaving machine, pulled together and stretched on the hand weave. There is separation and washing of the fibers. The operational constraints of long-hours of sitting is experienced by the weaver, whose age ranges from 48-62 years. This is done for a week.

The white threads, on the weave, are rubbed with 2 kgs of boiled Tamarind seed pulp, for at least 18-20 times, along a length of 15 feet, per 'unni' blanket.

The energetic of the one unni 'blanket/carpet' weaving, at the Ethbarpalle village is as follows: (an average time of one month)

\[
\text{ENERGETICS OF 'UNNI' CARPET WEAVING}
\]

<table>
<thead>
<tr>
<th>Activity</th>
<th>Energetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cutting the hair, from the female sheep fur, for processing</td>
<td>1 male x 1 hour x 1 day</td>
</tr>
<tr>
<td>2. Separation of the 'unni' threads or fibers</td>
<td>1 women x 3 hours x 1 day</td>
</tr>
<tr>
<td>3. Thin shredding as well as threading into 500-600 spins</td>
<td>1 women x 5 hours x 30 days</td>
</tr>
<tr>
<td>4. Hand weaving or 'thread making' process (1 month)</td>
<td>1 women x 5 hours x 30 days</td>
</tr>
<tr>
<td>5. Manual 'Hand-weaving' activity, by pulling and stretching, separating and washing activities (1 week)</td>
<td>1 man x 5 hours x 7 days or (1 man x 8 hours x 20 days) (age factor-a constraint)</td>
</tr>
<tr>
<td>6. Treatment with Tamarind paste (boiled), by manual rubbing + collection of firewood.</td>
<td>1 women x 8 hours x 1 day</td>
</tr>
</tbody>
</table>
A man and a woman, together can weave an 'unni' carpet, in a month, to be sold locally where at Rs.500/- on an average, per piece in one year, they can make 5-6 carpets, for livelihood.

In an event of peak demand, weavers are hired, at the rate of Rs.150 per day and the labour charges for woman is Rs.100 per day and the raw material input-cost per carpet is Rs.120 in terms of 10 kgs of firewood(1 moppu or head load), 2 kgs of Tamarind seed pulp and 1 kg of unni thread per carpet(gungedi) (4 bundles) Under the above circumstances, the profit or economics of unni-carpet weaving is Rs.130 per piece.

The reasons, why they do not opt for agricultural labour is low wages (Rs.10-20 per day) and the farming occupation, do not encourage women from 'unni' carpet society 'because of excessive tiredness and no endurance. Earlier conflicts on allowing for cattle grazing - sheep/buffalo had forced then, out of agricultural labour, and they feel isolated. Women folk (20) work in the neighbouring village, Tolkatta, in Kancha grass cutting (JFM) at Rs.100-120 per month.

In addition to the carpet livelihood, they have an average of one acre of Sorghum and one acre of Tomato farm. Approximately 1 basket (10 kgs) of Tomato is sold, at the rate of Rs 5-6, at the farm-gate., accruing an input profit of Rs.50-60 per day.

Thus multivariant stratagies of carpet weaving, dry land cultivation of sorghum as a fodder and food base as well as small scale tomato growing and trade are the apparent food and livelihood security options for the community, who do not migrate, but are settled pastoralists with weaving, as their profession.

**INDICATORS OF TRANSIENCE-ETHBARPALLE**

* Small farmers - Tomato Growers)

* Today, there are 22 bore-wells in the village water is available at 150 feet.

* Most of us, share (3-4 farmers) the manure buy, from the commercial farms outside. Half a lorry-load, of Hen's or sheep manure would cost Rs 4000 - 4500 and would suffice, for the lands.

* With the advent of rains (1998), we switch to Rice (Samba variety), from which per acre, we get 25-30 bags of rice, in the season.
MIXED VEGETABLE GROWING AND TOMATO TRADE IN ETHBARPALLE
(Disaggregated entitlement mapping processes)

Mixed vegetable growing and Tomato trade at Ethbarpalle

Endowment mapping

Endowment mapping

Entitlement mapping

Social actors
Capabilities
well-being

(-)
* Present market fluctuations
* External market economy of Tomato trade.
* Lack of advisory services on Pests/diseases.
* Use of more fertilizers
* Shifts from cotton to tomato
* Market oriented monocultures (Tomato)
* Increased borewells

(?)
* Emerging themes
- Traditional crop history
- No land sell-outs
- Traditional crop history
- Cotton ➔ Tomato shifts
- organic farming by IRDS
- Diversified farming

(+)
* Enterprise additions
* LEISA options, High biomass base
* Agro forestry and Permaculture initiatives
* Diversity of crop strategies
* Use of organic manures (cattle, goat, sheep)
* LKMS: Tree diversity
* Use of sorghum + fodder mixes

Micro
* Tenural/Customary rights
* Inheritance
* Ownership
* Access to credit, role of IRDS
* Share cropping with neighbours
* Water access and conflicts

Micro
* Labour access
* Family household labour and children
* Mutual helpfulness-cultural values
* Hiring labour force
* Informal trade networks
* Livestock loaning
* Use of family labour
* Creating a Wood-pile
* Indigenous technology & knowledge
* Social relations & interactions
* Woman labour force
* Kin networks in labour
* Dry-land agri/horticulture options

Micro
* Informal trade networks
* Collections for market
* Male trader at farm gate
* Conflicts in market trade
* Socio economic factors of the market forces on ‘day to day’ basis (Price of tomato)
* Sale of Labour force to farm house.
* Sheep/goat manure trade
* Fodder sell out - dynamics
* Multi-trade routes

Fig. 8.5.3
PLATE XVII & XVIII
ETHBARPALLE
TOMATO PICKING & TRADING BY HOUSEHOLDS
* Our priorities in farming are towards

<table>
<thead>
<tr>
<th>Priority</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cost and affordability of purchase of manure</td>
</tr>
<tr>
<td>2</td>
<td>Access to water, by sharing the bore-water</td>
</tr>
<tr>
<td>3</td>
<td>Access to chemicals, for cultivation</td>
</tr>
</tbody>
</table>

* Tomato prices fluctuate at Rs 35-40 for 10 kgs (per gampa or Head load basket) in January (Sankranti or Harvest festival) to Rs 100-110; during Dashera (Festival of flowers) and to Rs 150, during summer. (Thus the price dynamics, is crucial, yet unpredictable, keeping the farmers under stress and adaptations towards survival and accumulation strategies)

* As one approaches Ethbarpalle, on the barren landscapes (common property resources), we would find transitional, penning units, who are an integral part of the socio-culture of the village.

* The completion of the school building and the access to water supply, down stream from the Ketereddypalle village, by the Government are important, this year (1998).

* A public telephone and two grocery shops have been started now (1998).— (when the research was initiated in 1995-96, the village had no such commercial starts...)

**RURAL-URBAN LINKAGES**

*In Ethbarpalle, rural-urban linkages are perceived through sectorial interactions such as ‘urban agricultural labour force’ in farm house, under situations of stress or drought or else through monthly remunerations. This is seen as occupational diversification, due to fallowing and as a newer opportunity seasonal sojourns of farm labour, for about 15-20 days, for incentives or else contractual labour as a daily work force, with the family household are options.

* The flow of people, towards tomato and mixed vegetable trade is determined by the socio economic condition of the household in time the availability of the perishable tomato produce, the transport system, the trend of prices in different urban-nodal markets perceived by oral testimony, informal networks, in the late evening or from the first transit vendors of the day, returning home. Complexities in migration routes, though neighboring farm house, households, villages, local markets as well as duration and direction, have ‘invisible’ and ‘visible’ impacts on their daily survival strategies.
Wider socio-economic dynamics is perceived seasonally during the months when there is off-time, the farmers adapt to varying strategies of dry farming, farm-house employment, middle-men in linkages to supplies of organic manure (Sheep and goat).

Women-folk work in the farm-lands, as a family-unit as well as look towards options in tomato picking and grading; have mobility patterns to the neighboring village, of Tolkatta- neighboring village (5 kms away) as labourers in kancha grass cutting (Joint forest management).

Trans-Pastoralism, is exhibited, by the communities, in the village, to the lakes, near the Hyderabad city, with implications of added labour opportunities.

Entry barriers into markets are prioritised by the tomato growers due to
- Monopoly of large farmers and their nexus with middlemen.
- Caste and gender bias. The Reddy communities negotiates the middlemen / trade-transit (as a historical lineage of the zamindari-feudal division, to the disadvantage of the peasantry)

Flow of goods

The small farmers, directly sell out at the farm gate, the tomato commodity, at a prescribed price and a token of transit payment is made to the middleman.

Flow of goods, to actual market places is influenced by building contacts over time, middlemen exploitation and bulk-negotiation of price at the farm gate itself and a low premium of compensation to the small farmers.

However, mixed apprehensions are perceived and cooperative facilitated marketing by NGO linked options is desired by both NGO/Farmers. The small tomato growers field that it's the right opportunity for the NGO to link towards first initiatives in agricultural related activities.

Flow of money

Transit and pick up of goods, is through networks too, wherein farmer friends from other villages can convey goods (agricultural products, information, inputs and outputs) through
money/barter exchange, Thus multiple-linkages are the norm in Ethbarpalle, which is strategically located amidst a cluster of villages, all of which are on the transit hub of, tomato trade to the city and secondary nodes.

*Flow of information* is through informal knowledge of Veterinary services, Seeds, Fertilizers, Pesticides, Market prices and Potential secondary nodal urban centers for the sale of tomatoes.

In Ethbarpalle, the rural-urban linkages across space with respect to flow of people, goods, money and information, into the Hyderabad Metropolitan Area, is visualised through the

* Local factors – Entire village in Agriculture, permanent residency market – driven choices towards tomato trade switching from sustainance to market based agriculture, along with crop-insurance with high human resources in farming.

* Historical – Traditional village with dry land Horticulture, agriculture and Forestry, and Pastoralism.

* Political – Medium-intensity of networking with markets. High intensity of local area networking and interactive newer initiates through outsiders

* Socio cultural – Typical Telangana pastoralism based dryland farming legacy.

* Ecological history – Natural endowments is high in terms of Pastoralism, forestry and soil status / fertility maintenance, on the landscape.

**FARMER'S REALITIES IN ETHBARPALLE**

* In the last twenty years, no one has left the village and migrated

* We have all been peasant Pastoralists. Mixed farming his been since the 1940s.

* I can identify and name the trees in the village, in terms of its value. I have been seeing them, since childhood. Fortunately, they have not changed.

* We are all very busy with agriculture. So busy, that we do not quarrel. We are totally dependent on this, for our livelihood.
* Even if the rice is fallow, due to lack of water, a farmer would opt for Jivvi.

* Tomato prices fluctuate on a day to day basis. In the village, night transit and early morning transit of tomatoes, is common.

* Everybody is in farming, my boy helps in the farm, at home and goes to school to (9 years old)

* Heaping of organic manures (sheep and goat penning, fodder straw, husk and cowdung) is common, along the roadside, belonging to each farmer.

* The transect walk, gives us the feeling, that we know our village well.

* As an NGO, we are focused on women, preschool and night (Balwadi) school education, thrift and credit system, and housing, as on date. We have not yet entered into agriculture and their livelihoods. Yes, we understand and share the objectives of vocational education.

* The IRDS, has its own farm. We are interested in organic farming and linking with institutes.

* Sorghum fodder (Jonna soppa) – large size of 10" long, 4-5 kgs is sold at Rs 350, while the smaller size 4" long, 2-3 kgs is sold at Rs 250. Rice cereal straw (vare Gadde) as fodder is sold at Rs 25 for 15 kgs (1 moppu)

* For seeds, we go to Moinabad, Chevelle and Gudimulkapur villages.

* For fertilizers, the easy access is the poultry farm, in Kettereddypalle, 7 kms by cycle and Rs 3.75 to and fro, by bus. Getting it, from Shadnagar (35 kms, Rs 11.50 to and from, by bus and Dilshuknagar (40 kms, Rs 16, to and from by bus) is expensive.

* The people's perceptions in participatory mode are analysed in the matrix grids Tab.8.5.8 and Fig.8.5.5. and Fig 8.5.6.
### TABLE-8.5.8

**THE MESSY MATRIX**  
*(The Difference, Distribution and Dynamic Matrix)*

**MIXED VEGETABLE GROWING TOMATO TRADE COMMUNITIES - ETHABARPALLE VILLAGE**

<table>
<thead>
<tr>
<th><strong>The small forming communities</strong></th>
<th><strong>IRDS-NGO</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cultivate on ownership lands.</td>
<td>• Has initiated women's groups, thrift and credit society, housing schemes, and education ('balwadi' schools) with its own training centre in the village</td>
</tr>
<tr>
<td>• Perceive water access as a major constraint</td>
<td>• The local small farmers and their families are the NGO workers too</td>
</tr>
<tr>
<td>• Minor conflicts can arise due to lack of access to water in fields.</td>
<td>• The NGO and the farmers together, are now interested in eliminating middlemen in agricultural trade.</td>
</tr>
<tr>
<td>• Share the work among the household, in the fields</td>
<td><strong>Conflicts arise due to</strong></td>
</tr>
<tr>
<td>• The household neighbours or informal kin networking can facilitate post-harvest tomato marketing too.</td>
<td>• Competition at the farm-gate, due to involvement of middlemen and large farmers (reddy community)</td>
</tr>
<tr>
<td>• Social and interactions are perceived by fuel, food and fodder exchanges or barter.</td>
<td>• Nonclearance of loans by the village head and hold-up of 'patta' (land rights) clearance papers, by the influential large farmers.</td>
</tr>
<tr>
<td>• Other then subsistence food, the agricultural commodities or monetarized in the market.</td>
<td>• Nonallotment of electricity during festival seasons, in preference to other villages, because of negligence</td>
</tr>
<tr>
<td>• Fodder, fuel wood is sold at a price, at the micro level and to Farm houses.</td>
<td><strong>Co-operation between villages and farmers of Ethbarpalle are in</strong></td>
</tr>
<tr>
<td>• Women work in JFM initiatives at Tolkatta (neighbouring village)</td>
<td>• Trade networking to market places (transit facilities and minor adjustments of sale profits)</td>
</tr>
<tr>
<td><strong>Newer opportunities are perceived in</strong></td>
<td>• Barter of fodder, sheep and goat manure, in return for seeds, and services.</td>
</tr>
<tr>
<td>• Small, contractual labour in farm houses.</td>
<td>• Inter-village household small loans and clearance by barter.</td>
</tr>
<tr>
<td>• External, market-economy influencing tomato cultivation</td>
<td><strong>Contd...</strong></td>
</tr>
<tr>
<td>• The establishment of government rythu bazaar (shanty at the peri-urban fringe, which avoids middlemen)</td>
<td></td>
</tr>
</tbody>
</table>
**Dryland peasant pastoralists perceive**

- Carpet weaving, as a village industry in dwindling, due to lack of finance, market and the exodus of the younger generation into farming (dry land)

- Womenfolk need daily wage labour since their own fields are dry and fallow

- Access to credit, debts and sale of goat/sheep, due to local diseases is the reality of hardships in their lives

- Transpastoralism is adjourned due to earlier conflicts and lack of water access, in the farmlands

<table>
<thead>
<tr>
<th></th>
<th>The need for financial support, for their livelihoods as priority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The need for para-veterinary training and advise.</td>
</tr>
<tr>
<td></td>
<td>The dwindling herd size in relation to their livelihoods.</td>
</tr>
<tr>
<td></td>
<td>Liverfluke infection of herds is common, during rainy season (‘borra’ disease).</td>
</tr>
<tr>
<td></td>
<td>‘Mobile penning’ and informal linkages to farms is customary.</td>
</tr>
</tbody>
</table>
ETHBARPALLE

Tomato Cultivation

* Peak seasons June-July and November to January
* Seeds/Variety K12 Ruby
* For 0.4 hc 400 gms seeds are required
* Input cost-seeds Rs. 130 - Rs. 150
* Each gampa or basket or headload (10-15 kgs) fetches the price as follows:

<table>
<thead>
<tr>
<th>Price Range</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rs. 45 - 50</td>
<td>November</td>
</tr>
<tr>
<td>Rs. 30 - 35</td>
<td>December</td>
</tr>
<tr>
<td>Rs. 20 - 25</td>
<td>January</td>
</tr>
<tr>
<td>Rs. 35 - 60</td>
<td>range on any day</td>
</tr>
<tr>
<td>Rs. 80</td>
<td>April</td>
</tr>
<tr>
<td>Rs. 90-10</td>
<td>May</td>
</tr>
<tr>
<td>Rs. 80-100</td>
<td>June-July</td>
</tr>
</tbody>
</table>

* From 0.4 hc daily 5-6 baskets (on an average, is procured) 10 baskets, on the higher side (November - January)
* Daily wages from picking (if employed, wage labour)
  - Rs. 20/- per woman
  - Rs. 35-40/- per man
* Rent for transit of one basket, at farm gate Rs. 1.00 per basket
* Rent for transactions by middle-man per day Rs. 70-100

The economics of Tomato trade, is deduced by participatory appraisal, from the small farmers. The price fluctuations of the basket or head load is a crucial factor for their daily economics of trade and accumulated strategies.
**TABLE - 8.5.10**

**DOING AWAY WITH INDICATORS**

**The positive factors for interactions with the insiders**

- In formal networking with mobile 'penning' pastoralists - a reality
- Insiders are permanent NGO employees
- High biodiversity - Indigenous knowledge of trees
- IRDS permanent Night/Adult education school-building in Ethbarpalle
- IRDS employees, networking between neighbouring villages and social exchanges
- Common 'transit' bus route, through neighbouring villages, of IRDS adaptation
- Local, non-migrants, small farming communities with entire family in agricultural labour and related activities
- Ethbarpalle today, is perceived as a prime peri-urban market node in the reason, for tomato trade, involving secondary and primary markets
- Local NGO farmers are starting to learn, integrate and transfer 'participatory monitoring' exercises, in the networking villages and within their group.
Herd represents a capital investment, in Ethbarpalle, with social functions of stock-farming (bride price, slaughter, distress sale). The reduced dependency on market, by production of own cereals, trading through surplus to purchase stocks as well as maintaining, the starting herd, selling of the sheep flock and rebuilding are the patterns of stock farming. (Adamou 1991)

The pastoralists, maintain cropping (dry) and livestock husbandry, to enhance subsistence security ( Bayer and Ann Waters –Bayer 1991).

The adaptive mechanisms of sustainability by the pastoralists in Ethbarpalle are:

- Temporary contacts and trade with settled local farmers, in terms of manure barter.
- Practice of opportunistic cropping themselves
- Risk reduction by increased mixed Herd size
- Manure management, with stall keeping (Pastoral-peasants) with bedding. (The spatial proximity is advantageous to them).
- Allowing for grazing on fallow lands (complementary land use)
- The pastoral communities again settle near to the farming areas, primarily for their children’s school education and contacts- indicating improvement of their quality of life.
- They cultivate dry sorghum as grain and fodder, which, they believe improves fallow.
- Traditional manure application, than external inputs is the norm, in their lands
- Transhuman pastoralists maintain contacts for newer opportunities with local farmers, more so for ‘daily’ wage earnings, when their counterparts look after grazing by herd accumulation.
- Their itineraries of herd- movements, during PRA is indicative of their acclimatization to forage and water points. The pilot zone of ‘Osman sagar’ and Himayat sagar (30-35 kms) away, where they proceed to migrate, atleast 15-20 days in advance, is deciphered.
Pastoralism in Etharpalle - A
(Disaggregated entitlement mapping processes)

(A) Pastoral - Peasantry

Micro
* Ownership rights
* Customary rights
* Informal networks

Meso
* Access to water/
  Land resource
* Access to market

Micro
* Local Flow cycles
* ITK
* Herder's penning
* Farming experience
* Enterprise additions

* Marketability Trends

* LEISA options
* Permaculture initiatives
* Agro forestry
* Enterprise Additions
* Bio resource flows

* Veterinary services

Endowment mapping

Entitlement mapping

Social actors
capabilities
well being

Fig. 8.5.5
Pastoralism in Ethbarpalle - B
(Disaggregated entitlement mapping processes)

**Pastoralism in Ethbarpalle**
(B) 'unni' carpet weaving and Dry farming
Sorghum & Tomato cultivation
and Goat penning

**Landscape**
(+)
* Rural tourism-revenue
* Organic amendments
* Mixed farming
* Peasant-Pastoralism
* Goat stocking
* Veterinary services
* Pulse intercropping with sorghum

(-)
* Transpastoralism
* Fallow lands
* Absence of penning
* Dry crops
* Less organic amendments
* Health and veterinary services?

**Micro**
* Customary rights
* Tenural rights over land and goat.
* Intra-Household Gender division of labour
* Informal market networking

**Endowment mapping**

**Domestic crop and Unni carpet sales**

**Entitlement mapping**

**Social actors**
Capabilities
Well-being

**Micro**
* Intra household reciprocability
* Social norms * Marriage
* Contested claims * Gift
* Local politics * Barter
* Kin networks

**Micro**
* Monetary/Gift/barter
* Reciprocity
* Market value
* Informal market channels
* Rights for Grazing/water
* Health and veterinary services
* Gender division of labour

**Meso**
* Cottage industry (?)
* IRDS priorities and capacity building
* Tree-Goat integrated farming

Fig. 8.5.6
- Their priorities range from lack of drinking water points for livestock, insecurity and cattle theft.
- Many pastoralists declared that veterinary services are the need, due to cattle deaths and dwindling sizes.
- Group loyalty and duration of time for discussions was itself, an indicator of sustainability of their livelihoods, by adaptation to stress and shock.
- The sighting of past confrontation, with the forest officials at the Mruganayani Deer Park, near Osman sagar lake due to their encroachments, was an eye-opener, for their accumulated stress for forage, more so in summer.
- They mentioned that they were labeled as −ignorant, stubborn, by the park officials and how they were taken into custody, animals were shot and they were penalised by paying fine.
- 'Unni' carpet weavers, remain 'elusive' to the realities by the peri-urban expansion, as entrepreneur pastoralists, who have now, been lost, due to their dwindling numbers. They attributed it, to lack of financial support and market for their occupation.

The elements which can contribute, as a step towards them, may probably lie in the local NGO mediated (IRDS) external interventions, on a

- Step by step approach towards small initiatives
- Staying with them, for a longer period of time and sustaining the visits, with para-veterinary services.
- looking into their views, by their choices of a representative (which they felt is an essential need to meet officials, IRDS and Bankers)

Again the weak points, of their livelihoods, run into the following:

- The contacts and PRA worked mainly with the male herders
- Regular contacts were elusive, due to nonavailability of pastoralists
- What is the commitment and attitudes of 'external outsiders' given vulnerable urban changes?
- Within themselves, most problems of livelihood security are not clear cut—more so, on the future of herd size.

Thus we have, that pastoral societies have complex objectives, more so under constant disequilibrium of the rangelands in the microniche. Pastoral planning and PRA/RRA, is different from agricultural projects (Bayers and Ann-waters et al 1995)
Despite the visual tools, it is made pertinent that their maps and diagrams were not interviewed, for fear that they may, as in most instances not respond, on a second line of investigation. The verbal culture itself, was the first step to comprehend a little about their livelihoods. Social behaviors and institutional issues, are apparently the determinants than territorial units, in such first studies. The sharing experience itself as a positive effort towards local opportunities for they drew the diagrams —thus ‘insiders’ — handing over the stick (Chambers 1998) was experienced

It is evident, that any capacity – building, along with the local NGO, requires that we focus on small issues first (Bayers and Ann-water-Bayer 1989), such as

- dual purpose crops for higher grain yield for food and better more for fodder
- integrate and learn within and with them about crop livestock linkages, in the local context
- give simple instructions and demonstrate sown fallow, for restoring soil fertility and/or prevent erosion, with economic advantages of fodder or fuel wood.

The local NGO can seek out the ecological and economic merits of the existing Low-External-Input systems, towards their own initiatives of organic farming. Thus is so, as experienced from the insider-NGO who notes: ‘Livestock keeping and cropping are spatially integrated in Ethbarpalle’.

The pastoral peasants are seen as a community, who increase their subsistence security, through diversification of the food and market economic —oriented activities. This is an uncommon ‘niche opportunity’ indicating a ‘process-sustainability’ or indexed as a grass root indicator.

Seasonal migration as an adaptation to pasture management towards highlands (in October), mobile camps, (in summer), leaving behind lactating cattle at households, and a combination of exchange for money and dispersal, is seemingly the reality of coping under stress.

Feeding on the cut branches of Acacia, Ficus (browsing) and grazing on leaves of Terminalia are indices of pasture control, for the difficult seasons ahead, as indicated by oral testimony.
Urban development seems to have stuck hard on their survival strategies, due to newer-economic changes.

"What do we do? We have no options, but to sell the sheep/cattle? Where do we go? Our livelihoods is in pastoralism only" - local pastoralists

The nomadic attitude towards survival, as summed up indicates that they themselves can neither control nor manipulate, because they lie outside their comprehension (Reckers 1998).

In conclusion, initiatives of PRA and monitoring, are definitely, the way ahead, for the insider – NGOs and external stakeholders and developmental aid. The present study might offer itself as the first framework for real-time assistance, to the marginalised, and it need sustain, through networking with the local NGO and the realities of the farming communities, in Ethbarpalle.

**MICRO REALITIES & EMERGENT PATHWAYS - ETHBARPALLE**

Keeping in mind, the limitations and possible newer initiatives, as prioritized by the NGO, the farmers’ needs and the vocational experience of Loyola Academy, we need to explore the issues, in the context of restructuring local elements, the relevant local strategies possible and explore the ‘matching’ of options, which can address to the ‘micro realities’. The networking initiatives, identified by the NGO and the researcher are by-

* Restructuring the local elements with relevant strategies, by interventions of the NGO-led, Loyola vocational programme cum training, seeking newer partners such as Deccan Development society, Hyderabad, as well as outsiders an distant partners such as regional networking with MSSCSARD, Chennai, and AME, Bangalore are apparently options, towards newer changes in the study areas, maintaining easy access and horizontal transfer of technology (a strong link of permanence).

* The intake from the feeder district and study area domains for the undergraduate curriculum, places an opportunity for sustained ‘micro-developmental options’ in the village.
TABLE - 8.5.11

MICRO REALITIES - SWOT ANALYSIS -
LIVELIHOODS IN TOMATO TRADE - ETHBARPALLE VILLAGE

STRENGTHS

* NGO initiated capacity- building (Housing, Thrift and credit society)
* Farm household based community farming
* Natural endowments with Crop - livestock - Tree Diversity
* Small farmers as enterpreneurs
* Accessibility, track record and Networking of the NGO

WEAKNESS

* Market networking of small farmers- a limitation
* Perishability of economic produce (Tomato)
* Economic status of the small farmer
* Outside competition from large farmers hailing from the Andhra Region
* Middle men and trade negotiation at the farm gate itself.

OPPORTUNITY

* Cooperative marketing (NGO initiative)
* Low cost storage facility and training on perishables (collaborated and initiated by Loyola Academy and Indian Grain Storage Research Institute, Hyderabad).
* Research -led, voluntary training, education of the local NGOs farmers, in diverse areas of eco-farming. LEISA options- (NGO mediated)

THREATS

* Recent conflicts in the Rythu-bazaar (People's participatory shanty markets, initiated by the Government of Andhra Pradesh) and its work feasibility, in terms of economics.
* Rythu bazaar, is viewed as a parallel market, developed for small farmers. Due to it's inception (1998), networking with large farmers is strained.
## EMERGENT OPTIONS IN ETHBARPALLE VILLAGE

### POSSIBLE NGO INITIATIVES

- Organic farming (Agro Forestry and Bio intensive farming)
- Rural tourism and unnicapet weaving as a small scale industry
- Vermicomposting and organic manure centre
- Natural health and foods for urban consumers
- Collaborative partnerships in eco-business.

### POSSIBLE RESEARCHER / LOYOLA ACADEMY LED INITIATIVES

- LEISA based livelihoods
- Organic Horticulture / Olericulture
- Leisure / adventure tourism in farm houses
- Small farm bioresource-flow enterpreuners
- Training, Education and networking for vocational youth and enterpreuner farmers
- Revival and integration of crop-livestock-Tree-Natural Resource linkages.
- ‘MOU’ options with diverse stakeholders
- Landscape designing in farm houses (Private enterpreuner based)
- Permaculture urban farms(?)

(Participatory sharings with NGO-IRDS-Ethbarpalle)
* The optional viability for LEISA based livelihood entrepreneurship is possible due to the entire household in farming and the traditional knowledge of the village.

* Rural tourism and encouragement of a Craft center on ‘Unni Carpet Weaving’ towards resurrecting their livelihoods, through newer linkages in college-fairs, Trade centers,(NGO/college sponsored stalls) is seemingly possible.

* Small scale initiatives towards Organic horticulture (grape, pomegranate, mango) and horticulture (roses, jasmines) land scape design, parallel to leisure, and adventure tourism, in the farm-houses, adjoining the village is an open option. The parallel training of farmers/student led project work with collaborations of the partners can be envisaged.

* Towards an ongoing initiatives of memorandum of understanding, with local, and newer partners from Farm-business, enterpreuner-houses might be a possibility to be explored, as a reality, for interventions with the identified partners.

* Nodal center of vermicomposting, and organic manures - The feasibility exists by networking with institutes like Society for Quality of Environment and Life (SQUEL), Hyderabad, and Bhawalkar’s Earthworm Research Institute, Pune. This option, is either strengthened by Crop diversity, as evidenced from the seasonal calendar and the traditional practices of earthworm sightings in the village.

* Penning and veterinary services can be upgraded, by the evokement of innovative livelihood strategies, than the existing transhuman pastoralism, with economic and ecological rationality such as :

(a) Identification of integrated crop-manure-livestock market economy farms, as viable systems for interventions and innovations, to contribute as a sustainable livelihood-based small farm. Entrepreneur farms, with the beginnings of bio resource flows (Lightfoot et al 1991) can be tapped for expertise, education, training and networking.

(b) Agroforestry and Bio-intensive farming can be initiated, with a start-up ‘Tree Nursery’ and integrated NGO – led, ‘Tree-Fodder-Fuel banks’

(c) Farming communities with repositories of traditional seeds can be strengthened,
with voluntary input support systems. Parallel to this, post harvest storage facilities in collaboration with IGSRI, Hyderabad, is a feasibility

* Training, vocational-Job-led enterpreneur marketing, eco-preuner and green-business initiatives, into 'Organic grape cultivation, 'Landscape designing in Farm-houses", with a short- term orientation training, in the village in organic farming, NGO-led co-operative marketing are realistic opportunities. The initiative, would possibly contribute as the pioneering one, in the 'City of grapes'-Hyderabad.

* The catchments or partners in collaboration, are the new entrants (the city elites, multi-national companies with their leisure home options). Revival of agriculture, attracting tourism, opens the perspective for the recent emerging trends for natural and health foods in the Hyderabad metropolitan.

* While exploring the options and opportunities for organic marketing, in Indian metropolitan cities ( Lanting and Chitra 1999; Somasekhera Reddy 1999), it is pertinent to explore, the production system tuned to local markets (in the situation - tomato and grapes) and any seasonal products, worth exploring.

* Promotional campaigns, production planning, timely production targets, sustainance of producers (till profit' becomes visible), quality and pricing, matching with the conventional products (the rates of Tomato and grape sell - are still economically low and attractive in Hyderabad).

The exclusive-market clientele, (for export/outside transit to other metropolitans-which is apparently 'seen as profit-making) and whether the farmer household will be paid more? For how long? are the varied facets of the possible viable option, which the NGO need explore.

* 'Study the market first' is advocated by the researchers from AME Bangalore (Lanting & Chitra 1999) and the obvious starting points, could be consumers and their networks, at the Farm Houses - Corporate companies, as well as hostels, hotels and nursing homes (NGO or college led-entrepreneur-business linkages) – which are seemingly -an assured client.
In situations, of LEISA or NGO-led farming, small farmers require:

* A Trader — the producers need have access to capital, assured transport provider, a linking agent, and input supplier and a flexible backup for economic and time-based returns, insurance for crop choices and loan recovery. In this situation, the role of the interested IRDS- NGO comes in, at Ethbarpalle. The strong points being ‘permanence, earlier capacity building initiatives and local area networking, since more than a decade.

**Quality guarantee**

* Inspection, certification, as two components, may possibly be vested to the local research and the institution(s), and collaborative partners such as Vazir Sultan Tabacco Natural Products Division, Hyderabad. The marginal profitability, scrutiny and certification, with representatives and tags would possibly involve the vocational college, adjoining local and regional networks and the NGO.

**Exclusive markets**

* Collection, transport and seeking out client-servers, is recognized and acknowledged by the NGO, with possible options on ‘Econet’ organic shops, in the city.

**The consumer**

The marketing feasibility with price, appearance, product diversity, retail points in neighborhoods, easy mode of payment, are to be explored.

Steady supply, easy assess outlets, diversified client, minimum storage losses, medium-pricing and economic viability (Reddy 1999) are the points to ponder.

It is to again emphasize, that the producer (NGO led farmer, Coorporative farm-House led new enterpreuner, or innovative farmer) has to engage in labour intensive, yet ecofriendly cultivation on small-plots, to maintain rotation and demand schedules, keeping in mind-steady markets, perishability and changing priorities under circumstances of urgency sell in the ‘open-market’.
The first-steps in eco-enterpreunerships

* It is apparent that for expertise, follow-up, and project feasibility, Loyala Academy vocational programme have a ‘MOU’ with AME, Bangalore

* The sustained networking and ‘interface’ (rural-urban) initiatives, need be professionally driven, by the IRDS. Projects by BSc Farm Science students, can act as ‘linkers’ or partners, towards the approach.

* ‘Organic Farming’ – Enterpreuners – NGOs – vocational training- Certification – as viable options, could be explored, through interactive, innovative, open sessions, at the campus or more strongly through newer collaborative partners (Industry-Education interface)

The rationale, for the above options, with ‘older partners’ in innovation, is due to reliability and responsibility, in first ventures towards community-led developmental alternatives.

LEISA Village and Permaculture plot and Networking:

"In chaos lies an unparalled opportunity for imposing creative order"

"Order is found in things working beneficially together... True order may lie in apparent confusion."

Bill Mollison 1990

Ethbarpalle village, is ideal towards LEISA based livelihoods and organic farming initiative, primarily because of (a) NGO access and networking (b) NGO-Loyola Academy based vocational training option (c) recruitment of students from high school level till graduation in the vocational BSc Farm science and Rural Development Programme, of the parent institute.

Farmers too can shape the landscape, maintain it, with a local socio-cultural identity, as well as create products (agricultural and allied) amidst their historical routines of Pastoralism, Tree - integrated farming. Due to NGO networking, the farm households can match with newer farm-house linked initiatives in eco-agriculture/horticulture and
lanscaping, on similar lines of 'the permaculture plot', in the adjoining semiarid Mahbubnagar District (developed by Bill Morrison and the Deccan Development Society (DDS) Hyderabad.

Permaculture is a conscious design and the maintainance of agriculturally productive ecosystem, which have the diversity, stability and resilience of natural ecosystems. It is a harmonious integration of landscape and people providing their food, energy and other material and non-material needs in a sustainable way. Functional design, supportive components and the principle of self reliance, long term bio social factors, research and consultation with clients and open growth are the impetus for design of permaculture. Inventories fo local diversities are seemingly a pre-requisite (Mollison 1990).

"The end-use need be the functional designing of the permaculture plot, integrating with the local people's social culture, with an inventory of fodder and fencing species. This area, has 70% dryland agriculture with almost 60% of marginal / small farmers. Sustainability and energetics, need be maintained within, at the micro level and not from outside. Biomass diversity, soil regeneration and water harvesting opportunities, need be built up upon the eroded, natural resource base in the region. Leguminous plants as well as fast growing, non browsing, local, hardy trees are of importance in permaculture initiatives. Involvements in earthworks (landscape designing, from the soil level) is a priority.
We need focus on the 'local' species of the region".

D. Venkat, Former President
Deccan Development Society, Hyderabad.

The Farm-houses, sprawling in the neighborhoods, 10-12 in number, private-owned, might possibly be initiated to develop, through vocational-training and landscape designing, as well as networking with DDS, and Loyola in-house students towards newer initiatives of parmaculture.

Manon et al (1998) have studied the options of farmer-first approaches, towards learning and designing by agrozoning about permaculture, with a human ecology perspective. The
study emphasised that permaculture is one of the promising approaches towards small farming in Hyderabad SAT region. Permaculture and landscape design, organic farming and LEISA options at the micro level, could work at Ethbarpalle with collaboratorive partners as a begining.

Parallel to this, the School of Ecology, M.S. Dissertations on 'alternative tourism' which prescribes a 4 months residential stay, based on intensive-study, can also be ideally linked to studies on adventure tourism, for the urban consumers in Hyderabad metropolitan, due to close proximity to study area in Ethbarpalle (linked to private farm houses).

Within the village itself, IRDS initiated and Loyola Academy supported/adapted 'permaculture plot' with a reference ecological farm, in the college campus, can be initiated with appropriate, local interventions. This could set the pace, for DDS-IRDS- vocational education/training through Loyola Academy, by initiatives of 'memorandum of understanding' with institutions, NGOs and the vocational college.

**Rural-tourism and folk-traditional carpet weaving centre**

The local people also need to receive visitors, as well as seek recognition for their work. This is, as a dialogue between urban consumers and the local culture. The 'Unni-carpet weaving community' can thus be prioritized by NGOs women networks, local and sponsoring Department of Crafts and Handlooms as well as the college, for options towards sales, business and promoting rural-village tourism and revenue at Ethbarpalle. Outsiders as 'distant neighbors' can possibly facilitate interaction between different actors (farmers, NGOs, government officials or private entrepreneurs, vocational centers, Trade sectors, college fairs, cottage industrial fairs) and be 'stakeholders' themselves. The Jesuit college, Faculty and students can set the pace for the in-house student project-reports, as a continuum.

While perceiving that endogenous development of marginal regions is a struggle, for power(Reemers 1997), the peri-urban fringe, seemingly an opportunity to work with.
Marketing center for organic manures and fertilizers and small scale vermicomposting center

Networking can be facilitated with Loyola Academy, the researcher and the adjoining military dairy farm, the SQUEL, in collaboration with IRDS, both of which are centers for vermicomposting and safe/distribution centers in Hyderabad metropolitan.

The linkages between the researcher, Loyola Academy and IRDS.

* As an internal part of the consultative network, it can apparently enable linkage with people donor agencies and the voluntary NGO as a medium term plan.

* An ongoing research and development programme, can involve donors, on a retention basis, with the researcher integrated with IRDS.

* The researcher and the parent institution, can administer, the financial needs, from donors as well as disseminate the ideology of the donor agencies, as vocational college cum training initiatives, seminars and workshops, for target groups, such as Urban societies (Horticultural Society, DDS, Local NGO consortiums, students, housewives and other Hyderabad-based environmental/rural urban organizations.

* The researcher and Loyola Academy, can be a trend-setter on issues, call in an agenda for voluntary action, with interventions of media and facilitate inter college-academic linkages, as well, on emergent themes in ecodevelopment and LEISA options- may be the first of its kind, in the region. (Ref. Appendix XII)

IRDS opens up, even for self-help groups, formed by beneficiaries, to advance their specific interest, with or without the assistance of the voluntary agency, over a period of time. Thus informal groups (women, youth from rural and urban) as an ongoing contact cum training could apparently help in the peri-urban fringe towards improving the livelihoods and eco-restoration of the landscape.
PLATE XIX & XX

ETHBARPALLE

PRA - INSIDER'S SOCIAL MAPPING
The options of FEN, as an integrated theme, where in the Food-Energy Nexus is lowered, already by the disaggregated ‘CDR systems’ and ‘transitions’ of the peri-urban landscape and livelihoods, is thus viewed, in a different perspective, with ‘newer initiatives’. The IRDS, at its urban node and Training centers, along with ‘entitlement assessment of target groups (vegetable and mixed farmers, pastoralists, unemployed youth in village, women, IRDS employees – who are by themselves farmers), can offer towards an efficient, people-centered, employment generated livelihoods such as: LEISA, organic farming, biofertilizers, ecorestoration of landscape, and on a long term, initiate a model LEISA village at Ethbarpalle, with bio-resource flow modelling and quantifying sustainability, more so among enterpreuner, farmers, in Ethbarpalle.

The rationale of the matching realities of the researcher and IRDS vision, is visibly perceived as the first-initiatives by the insiders’

“Our PRA/RRA exercise in Ethbarpalle was an eye opener, we as employees in IRDS and local farmers have initiated transect-walks, wealth ranking, social mapping’ in the contract meetings and as an integral part of several on-going programmes of IRDS in the target villages....”

“Again, we seek your interactions and continued renewal of contacts, with emphasis on agriculture (till now, not taken up seriously by IRDS) and maybe, vocational education’ (with matching objective of IRDS).”

Thus emergent pathways are perceived as an uncommon opportunity in the peri-urban landscape with multiple stakeholders- a reality to sustain, in the human ecology perspective!
THE SEARCH FOR SUSTAINABILITY

The new synthesis - a new naturalism.... be it the dancing Shiva or the miniature temples of Guerrero, there appears very clearly the search for a junction between stillness and motion, time arrested and time passing. We believe, that this confrontation will give our period its uniqueness.... we know that non-equilibrium.... may be a source of order...

"we begin to have a glimpse of the road that leads from being to becoming".

Prigogyne and Stengers 1985
Order out of Chaos
Man's new dialogue with Nature

Sustainability.... is an approach to learning.... yet in a changing world, there will always be uncertainties... they are all a recipe for Chaos

J. Pretty 1995
Regenerating Agriculture
Diversity and flexibility of both production and consumption activities as well as, making fuller use of temporal and spatial variability of the environment and production resources (Jodha 1995), is evident from the seasonal calendars, oral history of traditional crop-use, in the villages of Ethbarpalle and to a certain extent in Peddashapur. The enhancement of production options, to meet growing market needs is evident.

Local resource generation and recycling of products (Use of traditional seeds, as in Chengicherla, the oral testimony of rice and crop varieties in Peddashapur) as well as integrated use of organic manure (in Peddashapur, Ethbarpalle), to substantiate the constraints imposed by fragility, marginality and inaccessibility, characteristic of the area is perceived.

Demand management through informal resource and product rationing (Fodder and milk Flows in Chengicherla), Floriculture contract farming, trading, tomato cultivation, post-harvest processing and transporting with collective sharing arrangements, within and at the peri-urban fringes, involving group action (small farmer-networks), petty exchanges (fertilizers, seeds, manure, in absentia farming, transhumance (village to urban nodes, for transactions) are the normal patterns of Actor-Network-Linkages (oral testimony) in the study areas.

Resource upgrading (through technological innovations of High Yielding Varieties, drip-irrigation at Peddashapur village) as well as introduction of new crops, as permitted by folk-ethnobotany (LKMS and people’s preference of Trees at the JFM rehabilitation niche) is observed in the study areas.

The key implications of the above, in the context of ‘Socio-economics and unsustainability as lessons learnt are that, we can comprehend ‘the rationale’ of the traditional adaptation measures, and their role in creating circumstances conductive to the situation in the past (Jodha 1995). A synthesis of the traditional adaptive measures and the evidences from the present study are intercalated as in the Table. 8.6.1 to Table 8.6.4.
TOWARDS NICHE ACTIVITIES

As per Jodha (1995), fragile areas have high potential in niche activities/products with high comparative advantage (as in JFM initiatives of Chengicherla; Floriculture in Peddashapur; Tomato Trade and mixed Family in Ethbarpalle). However, their realisation calls for relevant technologies, support infrastructure, substantial investment and supportive macroeconomic policies, which are ‘discovered’ in the entitlement analysis, of the case studies and which have been missing largely, due to invisibility and neglect of the fragile area problems by the mainstream decision makers (Jodha 1995).

The above, again, might possibly be stepped up or intervened by ‘linkages and networking’ (Alders et al 1993) with NGO as well as an ongoing vocational education and training, from institutes such as Loyola Academy and searching out for newer, local partners in the peri-urban fringe, to be focussed on the socio-cultural background of the typical, Telangana small farmer. (otherwise, there might be varied scales of perception such as the ‘dilect’ is unique, with the Urdu-Telugu-mix-typical languages of the region. A strong limitation of distant and new outside partners, who are not the ‘locals’ is thus perceived.

Interventions as ‘windows of opportunities’

‘Interventions’, as prioritised by the insiders, can be possibly perceived, through the evidences of institutional analysis in entitlement-mapping as, in the case-studies, which in turn, has implications towards realisation of option-enhancement through ‘diversity’ and ‘niche’ products/activities. At this juncture, we seem to be perceiving NGO linkages/networking vocational education and training, newer ‘local’ partners, as well as from ‘distant region’ (AME, Bangalore, MSSCSARD Chennai). The strengths of the ‘first-links’ of the NGO is the forefront in most alternative ventures, towards the road to sustainability. The language barriers are both an advantage and disadvantage in multilingual South India. In Hyderabad which is ‘cosmopolitan’ in its cross-culture, interventions can be achieved, but it need be ‘worked’ to be realised by the multiple-stakeholders.
### TABLE -8.6.1

**THE RATIONALE OF THE TRADITIONAL ADAPTATION MEASURES IN THE STUDY AREA**

<table>
<thead>
<tr>
<th>Traditional adaptive measures</th>
<th>Evidences from the present study</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Local resource centered, Diversified production and consumption activities</td>
<td>* Time line in Chengicherla and Ethbarpalle (Oral-history)</td>
</tr>
<tr>
<td>Local resource regeneration and resource use regulation/rationing (by informal institutions)</td>
<td>* Seasonal calendar-Ethbarpalle</td>
</tr>
<tr>
<td>* Local resource regeneration and resource use regulation/rationing (by informal institutions)</td>
<td>* Oral-history-Peddashapur</td>
</tr>
<tr>
<td>* Collective sharing/recycling of resource/products, limited external input use.</td>
<td>* Traditional organic manure use in Ethbarpalle</td>
</tr>
<tr>
<td>* Nature and scale of mobility and local resource availability</td>
<td>* Complementary use of organic use in Peddashapur</td>
</tr>
<tr>
<td>* Resource upgrading; focus on low intensity use</td>
<td>* Goat/Sheep penning and integration of pastoral-peasantry in Ethbarpalle</td>
</tr>
<tr>
<td>* Resource protection; usage regulation</td>
<td>* Small farming in Ethbarpalle, with informal networking and petty exchanges of fertilizers, seeds, manure-linkages</td>
</tr>
<tr>
<td>* Nature and scale of mobility and local resource availability</td>
<td>* Transhuman strategies to secondary/primary market nodes for transactions and Actor Action Networks for milk, Fodder/ Floriculture Flows/Tomato</td>
</tr>
<tr>
<td>* Resource upgrading; focus on low intensity use</td>
<td>* Facilitated import of materials and focus on 'centers' of flower/fruit zones to create diversity niche for market.</td>
</tr>
<tr>
<td>* Resource protection; usage regulation</td>
<td>* Low intensity use of fuel-wood cut trees</td>
</tr>
<tr>
<td>* Nature and scale of mobility and local resource availability</td>
<td>* Evidences of rehabilitation of ‘kancha’ grass tract in JFM and ‘usufruct’ rights as well as shifts to fuel-mixes</td>
</tr>
</tbody>
</table>

Contd....
<table>
<thead>
<tr>
<th><strong>Traditional adaptive measures</strong></th>
<th><strong>Evidences from the present study</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* Diversity-involving a mix of high and low intensity land uses; a mix of production and conservation measures</td>
<td>* Sorghum (dry) + floriculture + Rice cropping in Peddashapur; Sorghum + mixed cropping + tomato cultivation in Ethbarpalle in land intensity (low/high) areas.</td>
</tr>
<tr>
<td>* Focus of security of subsistence needs, low and local-input use</td>
<td>* Conservation measures of soil-through additions of farm yard manure and traditional mixes (goat/sheep, manure + straw heap + organic amendments) in Ethbarpalle and Peddashapur</td>
</tr>
<tr>
<td>* Integration of production-consumption activities and self-provisioning</td>
<td>* Fallow lands, with livestock grazing and penning at Ethbarpalle.</td>
</tr>
<tr>
<td>* Small-scale, interlinked, diversified production / consumption activities, temporally, spatially differenciated activities for optimum use of the local environment</td>
<td>* Traditional (old) varieties of rice monocropping in all three villages primarily for household subsistence needs.</td>
</tr>
<tr>
<td>* Location specific, integrated multiple activities towards stability of total system</td>
<td>* Traditional, simple food habits of small farmers in Ethbarpalle &amp; Peddashapur.</td>
</tr>
<tr>
<td>* Specific opportunities, harnessed for petty trade and self consumption</td>
<td>* Fodder sorghum cultivation and mixes for subsistence food and fodder-stalks as in Ethbarpalle and Peddashapur.</td>
</tr>
<tr>
<td>* Niche harnessing integral part of diversified resource use</td>
<td>* Rationale and the practical initiatives of JFM in Chengicherla; pastoral-peasantry in Ethbarpalle; small-farm diversification in Peddashapur</td>
</tr>
<tr>
<td></td>
<td>* Joint forest management (scaling up initiatives)</td>
</tr>
<tr>
<td></td>
<td>* Sale of organic manure, small animals and entitlement exchange options at the peri urban interface.</td>
</tr>
<tr>
<td></td>
<td>* Production / exchange of entitlements accrued in Floriculture marketing via secondary nodes.</td>
</tr>
</tbody>
</table>
### TABLE 8.6.2
**SEARCH FOR SUSTAINABILITY**

(I) **TRADITIONAL PRACTICES - A MATRIX**

<table>
<thead>
<tr>
<th>Traditional Practices</th>
<th>Rice monocropping</th>
<th>JFM</th>
<th>Floriculture</th>
<th>Mixed vegetable growing and tomato trade</th>
<th>Pastoralism A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diversity and Flexibility of production</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>(Partially)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full-use of temporal and spatial resources</td>
<td>±</td>
<td>+</td>
<td>±</td>
<td>+</td>
<td>+</td>
<td>(Pastoralism)</td>
<td></td>
</tr>
<tr>
<td>Local resource regeneration and recycling / inputs use, due to limitations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+</td>
<td>(Pastoralism)</td>
<td></td>
</tr>
<tr>
<td>Demand management through informal resource / product rationing *</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Resource upgrading + New introductions + Folk knowledge</td>
<td>+</td>
<td>+</td>
<td></td>
<td></td>
<td></td>
<td>Rehabilitation (Past history of old strategies) Fodder banks in cities</td>
<td></td>
</tr>
</tbody>
</table>

*(A) Dry farming (B) Transpastoralism (C) Peasant - Pastoralism
* Collective sharing (group action, petty exchanges, transhumanism) in the context of Fodder, Fuel, Food, Milk, Floriculture, Vegetable transits, in the peri-urban landscape*
### TABLE-8.6.3
SEARCH FOR SUSTAINABILITY
(II) TRADITIONAL ADAPTATIONS - A MATRIX
IN RESPONSE TO THE BIOPHYSICAL CHARACTERISTICS
AND THEIR IMPLICATIONS TO ENVIRONMENTAL STABILITY/RISK

<table>
<thead>
<tr>
<th>Biophysical Features</th>
<th>Attributes of Traditional Adaptation</th>
<th>Implications (circumstances) potentially conducive for environmental stability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Regeneration</td>
</tr>
<tr>
<td>Inaccessibility</td>
<td>Local (Diverse) resource centered Production system</td>
<td>JFM</td>
</tr>
<tr>
<td></td>
<td>Local, Demand driven, Low capacity based, Low resource system</td>
<td>mixed-vegetable + tomato growing (Ethbarpally)</td>
</tr>
<tr>
<td></td>
<td>Limited, external reliance/support, compelling rationing of Demand and resource use and social sanctions</td>
<td>JFM</td>
</tr>
</tbody>
</table>

( JFM - Joint Forest Management in Chengicherla, PSP - Peddashapur village)
### Table 8.6.4

**Search for Sustainability**

*Primary Quality of Life Concerns in the Peri-Urban Villages*  
*(by ranking method)*

<table>
<thead>
<tr>
<th>Chengicherla</th>
<th>Peddaphapur</th>
<th>Ethbarpalle</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Youth employment in small trade</td>
<td>* Youth employment in urban sector</td>
<td>* NGO coordination in farming and livelihood</td>
</tr>
<tr>
<td>* Developmental Infrastructure of Roads, schools</td>
<td>* Vocational training</td>
<td>* Employment in Farm Houses</td>
</tr>
<tr>
<td>* Premium on high land sellouts</td>
<td>* Newer enterpreuner</td>
<td>* Middle men in marketing to be eliminated</td>
</tr>
<tr>
<td>* Strong urban networking and a transit centre</td>
<td>* Trade opportunities</td>
<td>* Soil and water testing</td>
</tr>
<tr>
<td>* Urban opportunities in diverse livelihoods</td>
<td>* Market linkages and networking</td>
<td>* Housing</td>
</tr>
<tr>
<td>* Forest based opportunities in</td>
<td>* High land sellout premium</td>
<td>* Local market facilities for storage</td>
</tr>
<tr>
<td>* sheep</td>
<td>(Airport corridor)</td>
<td>* Veterinary services</td>
</tr>
<tr>
<td>* Agro Forestry</td>
<td>* Central hub for grape cultivation + expertise</td>
<td>* Education</td>
</tr>
<tr>
<td>* Fruit Trees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Local Liquor Trade</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*Listed according to priority*)
Diversity and 'niche' products activities vs biophysical constraints and human-induced circumstances.

Niche products and activities have a comparative cost advantage vis-à-vis prime lands (encroached, disputed territories, no clear rights, to a large extent 'manyam' or temple endowment lands of the government in Chengicherla, which cannot be sold). Thus the rehabilitated track of JFM in Chengicherla, presents itself, as a special opportunity, in terms of accrued economics.

Resource diversity, is apparently the basis for diversified and land-based (small farmer-owned) activities, in the fragile resource areas in Ethbarpalle.

'Resilience' of the farming communities as well as their ability to produce a market surplus, for exchange entitlements, in terms of monetary cum urban goods, is the focus at Peddashapur. Farmers are dependent on how diversity and niche opportunities are shaped and harnessed, by their own strengths and weakness- constraints or opportunities, in the study area.

In the fragile resource zones, both the biophysical conditions and man-made circumstances conspire to severely restrict the scope of option enhancement through secondary and tertiary activities (Jodha 1995). Diversity and 'niche' products/activities offer the only opportunities for such an option enhancement, which as implicated is severely constrained by fragility, marginality and inaccessibility.

Firstly, to discover and understand the dynamics and the comparative advantages and limitations of such niche activities / products, we have the 'entitlement analysis' analytical construct (Leach et al 1997), which vividly, in participatory manner portrays the environment change (Mearns 1995) and captures livelihoods-dimensions of poverty (in terms of vulnerability) (Chambers 1995) and environment change (Mearns 1995).

Seeking to match the realisations of relevent technologies, support infrastructure, substantial investment, supportive macro economic policies with possible linkages and networking with NGO, vocational training and education, on an informal basis, and towards newer, local partners, in the peri-urban fringes of Hyderabad,
Locale-specific issues and partners are sought, to address to the socio-cultural background of the typical small farmer-livelihoods, keeping in mind, their dialects (the Urdu-Telugu language mix), the lineage and historical perspective of the micro-region. This is so, because matching interventions, from distant partners, is a possibly, a broad option towards issues, in the region, which may or may not be rewarded, given the financial constraints. An on going partnership, between the NGO-vocational education and training institutions and the macro-cum meso institutions in terms of ‘exchanges’ of information, techniques and the ‘state of art’ to step up, through interventions is seemingly a viable option, to be worked out. The entitlement mapping is the central analytical construct of the multiple-stakeholders, for the case-studies.

The urban opportunity

While realising the limits, integrated Food-Energy system, might be a reality, in the region under the options of (a) small-family livelihoods and Farm houses- as in Ethbarpalle. (b) locale specific, commercial ventures of Floriculture/Agriculture /Horticulture at Peddashapur (on the path towards industrial agriculture), and (c) NGO-cum newer partners led- LEISA farming at Ethbarpalle. (d) Community based JFM in Chengicherla is realistically, an exercise in Integrated FEN system, for it provides for opportunities, in terms of labour (human energy), fuel and other commodities as options (which through entitlements exchanges is apparently commodified by the locals). Given the seemingly fragile terrain of semi-arids in the peri urban fringe, the reasons, towards ‘why’ three villages have been earmarked and chosen, now shifts from the earlier options forwards, towards newer dimensions.

Learning on the ‘Process continuum’ (Flip and Flop) and newer partners

An approach for ‘tracking change of change’, a new reason (understood ‘apriori’), for searching towards multiple options and constraints in ‘lcddu’/CDR livelihoods in terms of ‘dynamics of change’, the NGO (working in several target areas) and the researcher and the institute(with varied feeder-rural students from the local catchment areas, into vocational education), can perceive the ‘ebbs and flows’ in terms of unsustainability, for appropriate, local specific interventions. Is the ‘learning experience’ a reality- shared, towards the emergent pathways of sustainability? Researching simultaneously, in the three villages, it is apparent, that there are multidimensional issues and horizontal learning, on the process continuum, is a reality, which the NGOs can learn too. This is so, because they work in the range of villages, around the peri-urban fringe, in varied scales of participation.
Participatory evaluation - a need in Icddu/CDR Peri-urban investigations

The participatory evaluation (PE) offers itself as an unique opportunity to increase the relevance of external evaluations, for a wide range of stakeholders, by focussing on the beneficiaries. A quick RRA and a PRA done, by most NGOs, researchers, stands to lose, if not evaluated and sustained, by continous interaction, learning and follow-up.

The reason for participatory evaluation and the monitoring change of change is to broaden the appropriate range of stakeholders (Hammeijer et at 1999) and at the same time, be focussed (as the insiders' prioritise) and targetted to a limited number of issues of interest to the communities and NGOs. The approach acknowledges, that there will be issues and angles that are still unknown!. Finding the common ground, was by taking stock of the 'reality' of the survival business of the day, of the marginalised, in the 'Icddu'/CDR livelihoods.

Addressing to vocational training-youth, towards local livelihoods by matching the local needs (participatory evaluation) and options ahead.

Given the strengths of two decades of vocational agriculture and rural development education and training, with upgrading of the syllabus, on a demand-driven basis, Loyola Academy, as a stakeholder, can easily integrate, with NGOs, voluntary organisation and institutes (already in memorandum of understanding with firms, research organisations) to facilitate the following-

Options for vocational training in Peddashapur

* Post-harvest preservation of cut flowers
* Enterpreuner-linked Floral Nursery raising for Tissue culture labs
* Nursery multiplication techniques of floriculture crops
* Soil reclamation by organic amendments and vermicomposting
* Post Harvest Grain storage and management (Rice Bins) for buffer stocks
* Youth education, opportunities in the BSc Farm science and Rural Development course from the feeder villages (Chengicherla, Peddashapur and Ethbarpalle), so that they are trained and linked to the institute.
* Youth and 2-3 day vocational training, with NGO/ newer emergent partners, in the villages at the start (Ethbarpalle, Peddashapur) or at the campus.
* Visits to successful conservation /development initiatives in Hyderabad and its surroundings like Horticultural training center (Bonsai making, Horticultural Nursery Training, Ornamental gardening) Permaculture farm, Zahirabad, Military Dairy Farm, Loyola Academy, and Deccan Development Society (central node for vermicomposting, 5 kms from campus)

* Special events and idea Fairs (Barrini-Feyarabend 1997). Organised ‘on’ campus or ‘off’ campus or at the villages

**Options for vocational training in Ethbarpalle**

* Organic soil amendments
* Small-scale crop and livestock interactions
* Small-scale agroforestry entreprenuerships
* Para-veterinary training and penning

**Options for vocational training in Chengicherla**

* Forest Nursery raising
* Eco-tourism
* Camping and Leisure Activities
* Pasture Management
* Cultivation of Aromatic and medicinal grasses
* Landscape conservation
* Permaculture and Landscape Designing
* Local Park Management

Small farmers, under transience, would remain in the main stream of livelihoods apparently scaled up, due to newer peri-urban opportunities. NGOs are a safer bet, than government! But how do the locals view it? Accountability of NGOs requires an independent certification (Can Loyola Academy do it?) Thus several unknown contingent factors, seem to emerge, when broad objectives are put forth, too.

* Incentives for conservation accountability (Barrini-Feyarabend 1997) can be a reality, to be tackled by multiple-stakeholders, and the local communities.

**Jobs for local people**

Employing local people can also increase local control of initiative and promote the use of local knowledge (an ongoing option at Ethbarpalle) such initiatives, is possible, by ‘coupling’ the research initiatives with the local NGOs and unknown or emergent new partners in the landscape, keeping the insiders’ view as priority. The youth, desperately seek out, some option to learn and be educated, in their livelihoods, which has its roots in agriculture and the newer directions of trade.
MATCHING REALITIES : FROM INSTITUTIONAL ANALYSIS -
'THE SEARCH NICHETHE PATHWAYS AHEAD?

A critical analysis of the traditional practices, the inaccessibility and unsustainability dimensions of the case-studies, implicate, that options open, as we move through the cascade of collapsing frames: (a) From FEN to entitlements (b) From entitlements to mapping process (c) from the dynamics of the processes-changes towards the main frames of 'analytical constructs' of 'institutions'. (d) The dynamics and institutions which move on the non-equilibrium - messy matrix and lead us on (e) towards plus (+), minus (-) and (?) unknown issues, related to livelihoods and communities.

The cardinal entry of FEN -Human ecology perspective is thus perceived as the 'central recurring theme' in the 'vortex' of non equilibrium ecology. Collapsed livelihoods, environments and entitlements are deciphered, due to institutional analysis (human attitudes), the search 'niche' in the investigation. This has, in turn thrown ways to seek through 'indicators' (surrogative, grass root) and 'doing away' with them too.Every thing apparently is on the track of 'change of change'. However the peri-urban initiatives discovered, are seemingly feasible, towards newer emergent pathways.

"Uncertainties are great; there are clearly lot of issues to think about.... what is required is a process...and an awareness of the range of issues, which may be considered at various points of time. Different Knowledge System - scientific, indigenous - can be called on at appropriate points in this process to offer analysis and suggestions"

(Shepherd 1998)

CAPTURING COMPLEXITIES AND THE FIRST BEGINNINGS?

The disaggregated entitlement mapping process, are self-explanatory towards the viewpoint that different micro-meso and macro institutions mediate the access/failure towards access and effective command, over resources, which contribute towards the livelihoods, in the study area. The variants are a consequence of uncertainty and coping strategies, the vulnerability in the peri-urban interface and a multitude of factors. The indicators of unsustainability, as revealed in the case studies implicate the multiple options of daily survival among the 'Icddu'/CDR communitites.(The evidences of the messy matrices)
Inherent complexities and the trend towards fuzzy networks is discernable, from the background of messy matrices of human perceptions. The FEN, as an entry point, into the participatory monitoring, at the economic stakes of people seems the route towards perceiving multidimensional, multiple uses of the resources (Fuel, Fodder, Food) and their vivid monetarisation, in the rural urban transitional channels. In certain instances, such as the pastoralists, it is apparent that there are no recognised institutional networks to address to their realities. Learnings from the experiences, along the herders’ mobility open ‘the windows’ towards the real issues of the pastoralists.

The ecological pressures, thus are towards keeping issues of biomass in a jeopardy, under the local conditions and constraints (Hall et al 1982). The multiple feed back loops, of human dimensions seem too complex to mimic, with certainty (Alexandratos 1995) The range of adjustments, collusions and farmers preferences and values are captured ‘apriori’ on the process continuum of the study. The labour migration, marginalisation of farmers, the simultaneous adaptations to dry vs irrigated farming, shifts towards market oriented monocultures, issues towards linear flows and market economy are the insider’ trends towards de-agriculturalisation (Cacerus and Woodhouse 1995).

Structural adjustments, towards gross shifts, and responding to the conditions as they emerge, with no fixed options of livelihoods, is the learning processes of the investigation. Diversity, is apparently the key to respond to risk, under Icddu/CDR livelihoods. The farmers’ realities are at the fore-front, rather than the outsiders, in several instances of the study. Fallowing is a desperation among the poor farmers, in the region (Gopal and Shashikumar 1995) and is perceived, by them, as a risk adjustment strategy.

Institutions that mediate the ‘fuzziness’ of entitlement mapping are depicted, from the insiders’ perspective, towards their routes, which are indicative of the limiting (-) and possible breakdown (?) as well as newer initiating (+) factors, which may structure the landscape, in the case-studies. The communities, are thus viewed, as galvanised to take support from the NGOs, who again are on varied scales and levels of capacity building, in the context-situations.

The insiders’ perceptions, on several issues, are ‘indicators’ of their reasons to challenge, the complex realities of their livelihoods. Traditional practices adaptation and their amalgamated evidences of diversification and niche opportunities are captured in the matrices of the search for sustainability.
Interventions are seemingly a way out, though not the only solution, while analyzing their problems and the complex arena of non-equilibrium ecology. The local microdynamics and transience as well as networking possibly are the factors which can break or make issues.

The structuration of the landscape is thus seemingly through ebbs and flows of risk aversion strategies of pastoral-peasantry, the limits of mono-cropping, the opportunities of scaling-up in the events and contingencies of successful coalitions of NGO networking for niche diversifications. Parallel to this, are the individualistic/community-group sharing 'institutional dynamics' towards shifts and adaptations on emergent/unknown pathways of livelihood security, at the peri-urban edge.

As contexts change, so does the process of participatory monitoring and evaluation. New stakeholder groups emerge and some disappear, objectives change and therefore indicators change, methods continously evolve and the timing of monitoring is always being renegotiated (Guijt et al 1998). Researchers need to convey the implications soon, hence the 'open space' approach, in several issues.

The varied dimensions of participatory evaluation, in the study areas, are towards focussing to external evaluators and funding programmes too. Yet, within these boundaries, in terms of time and space (a challenging limitation, in participatory process continuum), there is considerable amount of 'creative space' (Harmmeijer et al 1999), where the present investigation addresses to, while acknowledging that taken together, it had been a first beginning of a new learning experience, with 'embracing error' (Guijt and Abbot 1998), away from the prism of uniform perspective (Vorley 1998).

A central challenge and objective for the future investigations is the transferability, application and integration of the lessons learnt, to the end users, into their programmes as an ongoing process, without which the thesis would warrent to be an end in itself rather than a means to sustain initiatives in the peri-urban fringes of Hyderabad.