Recognizing Inter-linkages

Many in the intelligentsia condemn cooperative enterprises as failed enterprise models. Their contention is that producer enterprises fail because of their inability to manage the potential political implications that organisational growth entails. Traditionally, many political parties have tried to control cooperatives either through state mechanisms or through nurturing a voter base within members. Of late a reverse mechanism has taken root. As economic development gains prominence, corporate enterprises desire a stronger control and influence over the political system leading to a tussle between economic and political systems.

With the Green Revolution, agricultural production systems were aimed at maximizing productivity. This was achieved through improved seed technology coupled with a lavish usage of chemical fertilizers and pesticides. For the past three decades the country has savoured the benefits of the Green Revolution and its improved yields. Today, it has been understood that such production system is unsustainable as it exploits rather than nurture the natural ecosystems. Therefore, we must think beyond plain economics and think towards a sustainable production system.

Similarly, the Nobel Prize Committee's recent recognition of work associated with climatic change, has propelled the world to acknowledge the linkages between industrial production systems, life style changes and imminent global warming.

At social level, increased urban migration has led to a gradual social change in the family structures. The occupational demands of a globalized society and its integrated trade systems have impacted people's lives & their biological cycles affecting society in profound individual, familial, social & cultural ways.

It is therefore very important to recognize the inter linkages that exist between the various spheres of life. The political, legal, technological, social, cultural and economic dimensions need to be viewed as a whole system, in its entirety. Peter Seige in his book “Fifth discipline” highlights this as 'Systems Thinking'.

How does one build this capability for “Systems Thinking” at the individual, community and at organization levels? It requires people and organizations to behave in an entirely different paradigm where returns are optimized rather than maximised. Maximisation behaviour does not allow recognition of others’ needs. And so an order of give and take, needs to be established, recognising needs of various systems and accommodating them. It requires people to move away from productivity or profit maximization to optimization models. This is possible only when individual / organisation is ready to forgo a small portion of our current returns as investment in other systems. Transforming India is a step towards establishing this order by sharing knowledge about various systems and enabling people to recognize the inter linkages that exist among these systems.
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## Beyond Horizon

Irula Snake - Catchers Industrial Cooperative Society: Honing traditional skills for livelihoods

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## Interview

With trade unionist Baba Adhav on role of trade unions

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## Case Study

Barpeta Districts Fish Seed Producer Society: A Cinderella Story
Letters to Editor

Dear Editor,

The April issue of Transforming India has come out quite well and I personally enjoyed reading all the articles in this issue, especially interview with B.M.Vyas is excellent. I liked his take on software engineers and urging them to own / create a brand rather than work for boosting international brands. His response on contract farming is also quite thought provoking. The article on ULCCS is also wonderful. I immediately circulated to few of our team members. It is an interesting model - worth studying and emulating. Thanks for writing about it.

I have a suggestion. I saw in another magazine that they had an Editorial Calendar. It mentioned what are going to be the highlights of the next few issues (probably for the next one year) going to be. This helps if any one wants to write an article on that topic.

S.S. Manoharan, Just Change

Dear Editor,

I came across Transforming India magazine in my office and read some of the articles on waste management and real life stories which were inspiring. I appreciate your efforts.

Taha Kothari, Student

Dear Editor,

I enjoy reading interviews in TI. I find your coverage extremely useful since I don't have any background in development. Like many young people in the country, I have been troubled by the skewed pattern of growth in our country. Your magazine is helping me to learn about issues in equitable growth.

You could have a column featuring career options for youngsters in this field. I hope you will continue to keep up the work.

Shruti Veenam, Student

Dear Editor,

I went through the recent issue of your publication, Transforming India, with interest. As a lay reader, I have the following comments to offer:

First of all, it is difficult to make out the target audience for whom this publication is intended. If it is intended for the general public, some of the contents are a little technical. If, on the other hand, it is addressed to some specialists in different fields, the content is far too elementary. Therefore, the editors will do well to map out their target audience with a greater degree of care and certainty.

This is the only limitation that I could find about the publication. Apart from that, some of the technical articles are excellent and so well explained in a lay man's terms that it will enlighten the lay public about some of the critical issues of our country and its problems. The issue of agricultural pricing is so well explained that I am going to use it as part of my under-graduate/post graduate lectures to students in economics in M.S. University, Baroda. In recent times, indeed, I have not come across any other publication which gives such a lucid exposure to such important economic issues.

Other contents are quite good. It made me aware of some of the socio-economic changes that voluntary organisations are trying to bring about in the Indian society. However, as I said earlier, there is a certain degree of looseness in the coverage. If the target audience is more clearly identified, this publication in future issues will certainly shine out.

As a teacher of Economics, I am also concerned with the affordability of the magazine to the general public. I suggest that the publication be brought out on simple, inexpensive non-glossy paper, which will reduce its cost considerably, and many more people will be able to afford it at probably a little lower subscription rate. Apart from this, it is a commendable effort.

D.K.Oza, M.S. University

We want to thank the following readers for their words of appreciation:

- V.B.Sohoni, Jankidevi Bajaj Gram Vikas Sanstah
- Santasit Das, Ambuja Cement Foundation
- Dr. S.V. Subbaiah, DRR
- Aditya Maheshwari, XISS
- N Bhaskara Rao, CMS
- Rajaram Dasgupta, National Institute of Bank Management
Although we have crossed the critical 3rd issue milestone, the fourth issue of Transforming India still faces the same challenges as were highlighted in earlier issues. We are still figuring out the business model for this effort to sustain. We are yet to standardize our editing process, improve the readability of the magazine and formally launch as a paid magazine. So right now we are ending up freely distributing it. But this is certainly not the way we would like to work on.

Transforming India is visualized as a strategic platform where issues related to sustainable and inclusive economic development can be discussed. Through Transforming India, we want to open millions of windows of learning for the people who are closely linked to this sphere of work and for general public eager to work and understand the cause. To drive this there are three central pillars: a. the supply side constituting writers, information collection system and publishing team b. the demand side essentially the varied set of readers and distribution network of magazines c. the business structure and model. Setting this structure well functioning is the core challenge currently the team is facing.

As expected, many people are writing to us and appreciating our work. The universal opinion is TI is really contributing towards understanding the actual working in the field. We have received many useful comments from academicians, practitioners and students who are finding new things about how sustainable poverty reduction is being shaped. While we are yet to get the feedback from general public, there seems interest at least to pick up the magazine. The coming issues will help us understand what the reality is.

This current issue attempts to present some interesting and really challenging things India is facing. India is a land of unending entrepreneurship. In the age of nano technology - unorganized sector is an example of nano-entrepreneurs generating mega employment. Understanding the way people operate in this sector and issues concerning them are important to strategise the way forward. Interestingly this issue also has an interview with an iconic personality, Mr Bhaba Adhav, who has worked with the unorganized labour in Maharashtra for more than 30 years. His effort reminds us the utility of organizing labour into trade unions. Unions are treated as anti-thesis to the government and management of organizations, however, if people recognize the need to co-opt wider stakeholders and work on optimized returns for everyone the unions still have very strong role to play in future. There are two more articles talking about what needs to be done with informal sector for ensuring greater prosperity to the poor.

In this issue, “Beyond Horizon” is featuring a unique cooperative of tribals from Tamil Nadu who are able to earn a living while harmoniously living with nature’s diversity. We are also making an attempt to initiate the thoughts of readers on cross cutting issues of Bio diversity Conservation and Non Timber Forest Produce management in a sustainable way.

Finally the debate whether organized or unorganized is more useful in promoting inclusive and sustainable economic development does not have a straight answer. However, like the world has started recognizing that the small holder farming is as or even more efficient than the large holders the unorganized seem to have a case as pointed out by Mr Manoharan in his article.

So wish you a happy reading…. 

GV Krishnagopal
According to NSS data, you are:

- Extremely poor if you earn Rs 9/day
- Above poverty line if you earn Rs 12/day
- Marginally poor if you earn Rs 15/day
- Vulnerable if you earn between Rs15 to Rs 20/day
- Middle income if you earn Rs 37/day
- High income if you earn more than Rs 93/day

According to Wall Street Journal, studies have shown that when people are asked how much it takes to be rich, they always give a number that's twice their current net worth or income.

According to Global Rich List*

<table>
<thead>
<tr>
<th>% of world Population</th>
<th>% of world income</th>
<th>Yearly individual income</th>
<th>Daily income</th>
</tr>
</thead>
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<tr>
<td>Bottom 10 %</td>
<td>0.8</td>
<td>$400</td>
<td>$1,10</td>
</tr>
<tr>
<td>Bottom 20 %</td>
<td>2.0</td>
<td>$500</td>
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<td>Bottom 50 %</td>
<td>8.5</td>
<td>$850</td>
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<td>33.7</td>
<td>$33,700</td>
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<tr>
<td>Top 1 %</td>
<td>9.5</td>
<td>$47,500</td>
<td>$130,14</td>
</tr>
</tbody>
</table>

*As per World Bank Development Research Group, with assumption that world's total population is 6 billion and the average worldwide annual income is $5,000.

There are two types of economists: those who cannot forecast interest rates and those who do not know that they cannot forecast interest rates.

Inflation allows you to live in a more expensive neighbourhood without moving.

Government's view of the economy could be summed up in a few short phrases:

- If it moves, tax it.
- If it keeps moving, regulate it.
- And if it stops moving, subsidise it.

Two social workers were walking through a rough part of the city in the evening. They heard moans and muted cries for help from a back lane. Upon investigation, they found a semi-conscious man in a pool of blood. "Help me, I've been mugged and viciously beaten" he pleaded. The two social workers turned and walked away.

One remarked to her colleague: "You know the person that did this really needs help."

What is the difference between God and a social worker?

- God doesn't pretend to be a social worker.
In Kannada film industry, people often use the concept of a “single line story”. A single line story is a gist that captures the "marketability" of the film; it is an indicator of box office performance and provides a prima facie case for funding by the producer. Similarly the election manifestos of political parties in our country also fall into the trap of showmanship of a single line story. What nobody seems to realise is that there have been surprise victories for people who have moved beyond these single line stories: The electoral defeat of a confident Chandrababu, the surprise victory of Mayawati who was almost written off, the victory of Narendra Modi who tried to used performance as a parameter for seeking votes, the brutal defeat of the BJP using the India Shining single line etc. As is common in the Indian film industry where rehashing the formula of successful movies is widespread, political campaigns seem to stand on the stilts of such borrowed imagination. In reality however there is no formula, no single line that can guarantee poll performance.

In earlier days, an election promise carried the identity of a political party. For instance the scheme of providing rice at Rs.2 per kilogram bore the stamp of the Telugu Desam Party. But with the recent spate of poll promises, it has become difficult to identify a political party with any particular promise. For instance, while the BJP government in Gujarat insists on collecting a full charge on electricity supplied and has been coming down heavily on power thefts, the same party has announced free power in Karnataka. The Congress Party has promised free televisions, a scheme actually launched by the DMK in Tamil Nadu. It has also promised rice at Rs.2 per kilo, a clear theft of the TDP’s identity. It is now, therefore difficult to distinguish between the manifestos of regional and national parties, leave alone their ideologies and political leanings. One common promise that has captured the imagination of all political parties, irrespective of ideology is trying to “reform” the rural financial system through announcement of loan waivers, interest subsidies etc.

Most of our legislators are elected from rural constituencies and have a good understanding of rural problems, unlike the cartoons that portray them. On browsing through the proceedings of parliamentary standing committees, we realise that they are capable of engaging themselves in serious debate over important issues cutting across party lines. However, when it comes to the parliament proceedings or to the elections, the complexion of their rhetoric changes completely. In such situations, the legislators are beings capable of thumping desks and arguing vehemently about what could be a "party line" even though they might lack personal conviction on the matter. In this light, we need to worry about whether Finance Minister Mr. P Chidambaram believes fully in the merits of the Rs.60,000 crore loan waiver package that he announced in the budget speech or was it possible to use the same amount of resources more creatively for the benefit of agriculture? When we do ask these basic questions, we possibly can deconstruct the friction between what is desirable and what could make a good story that captures the imagination of a large number of voters.

The ominous sign of the current loan waiver is there for all of us to see in the policies of the State in the past few years. The state seems to have sought refuge in pumping credit, whenever there has been an agrarian crisis. This is a good "single line story" that the state can narrate to the population at large. It is only on close examination of the policies formulated by different governments in the past decades, do we realise how myopic they were and are. (See: A snapshot of history of competitive destruction of rural financial institutions)

A common myth

When one is formulating policies for rural areas, the predominant myth is that it should be fully embedded in agriculture. As per the 2001 census, 40% of the rural population were engaged in agriculture as cultivators. Around 33% of the rural population were agri-wage labourers. So, when we talk about programmes rooted in agriculture, we are talking about the direct benefit to these 40% people. Similarly when we talk about poverty, we again seem to equate it with rural areas. Thus several
policies get formulated on a simple formula of poverty=rural areas = agriculture.

Even with the assumption of credit being the agricultural bottleneck, doubling of agricultural credit and the subvention provided for agricultural loans, should have resulted in some significant effect on agricultural output. But reality does not concur with this and the overall output has stagnated over the past few years. So, clearly output does not just increase by opening the credit tap. Higher output levels need better seed, fertilizer, water and markets. Without taking these four pillars of agriculture, there is little purpose in propping up the scaffolding of credit as a one point answer to agricultural crises. However for the government, doubling of agricultural credit in three years makes an interesting catch line which can be quantified and on which criteria the state can self applaud. It is possible to arm twist the banks to produce the concurring numbers. In comparison, how "sexy" is it to announce something pertaining to extension services in agriculture?

Since the onset of green revolution, the knowledge and skills of agriculture have moved out of the farmers' hands. Earlier farmers would save seeds from their produce and use it for the next season. However, with the onset of high yield variety of seeds, the farmer has to buy seeds every season. Every time the seed is bought, the package of practices suggested by the seed companies has to be followed. Agricultural technology has gradually moved out of farmers' hands and their unskilling has begun. The same story is applicable with other inputs such as chemical fertilisers and pesticides. When the state started abdicating its role in providing extension services the decline became steep. The extension services are now largely provided by interested parties like the seed, fertiliser and pesticide companies. Now, which extension worker of a pesticide company would advise the farmer against pesticide use in the best interest of the farm?

In addition, data for the last few years on capital formation indicates that private capital formation is growing at a faster rate than public capital formation. To simplify narration, let us take the example of water. If the State provides irrigation under a scheme of identifying a dam site and setting distributory canals, the benefit of water goes to the farmer. The expense incurred by the farmer possibly pertains to the last mile of taking water from the canal to the field. But if on the other hand, the farmer drills a borewell and lifts water through a pump, the entire expense [which is private capital formation] is his. He would also bear the risk cost of not finding water. He will have to borrow and service the loan from his own resources. In the first stage, it might still look attractive to him because the increased availability of water might result in increased yield which could service the loan. However, if for instance, the water table falls and he has to deepen the well and add more capacity to pump water out, there is increased investment, borrowing and servicing costs to possibly obtaining the same yield. This is akin to running on a treadmill - you need to run to stay where you are!!

One wonders how policy makers stay indifferent to the fact that while the retail revolution based on agricultural production is blossoming, farmer suicides are becoming widespread. All this at a time when the corporates are entering food and agri based organised retail in a major way- the list includes the Tatas with their Star India Bazaar, Amabani's Reliance Fresh, Birla's More of you, ITC's Choupal Sagar, Biyani's Big Bazaar, RPG's Spencers, Dairyfarm's Foodworld, Metro cash and carry from Germany, Walmart-Bharti ... the list just goes on. Why are these corporates investing in one part of the value chain when the other is struggling for survival? Is it not indeed a contradiction of an immense magnitude?

As per an article written by Rakesh Mohan, the Deputy Governor of Reserve Bank of India, only about 20-25% of the investment in agriculture is funded by credit. This percentage reduces to about 5% of the value of output. Therefore a policy that is centered on credit supply might be somewhat misplaced. If the overall investment funded through credit is 20% then what would be the impact of any interest rate concessions? Would there be any significant impact in the economics of agriculture by tinkering around with the interest rates of institutional credit? Could we, on the other hand try and increase the institutional share credit component of the investment from 20%? Yes, of course! However, it cannot happen if we are assaulting the institutions that have been laying the golden eggs of credit right from the 1960s.

On examining the broad numbers of indebted farmers committing suicide, we realise that these farmers are not necessarily the small and the marginal. From the statistics of the Reserve Bank, it is evident that while agricultural loans have doubled, the actual number of borrowing cultivators has gone down, thereby increasing the average amounts lent per account. In a situation where the average holding size is decreasing across the country, we do not require any sophisticated statistical exercise to declare that these loans are moving towards larger farmers. If the average loan size goes up, without a concurrent increase in the output we can at best draw one of the two following conclusions- the repayment capacity of the borrower must have significantly gone down, or the loan must have been diverted to some other purpose. Either way, it is very evident that there is a time bomb ticking in the doubled agricultural credit situation.

Who is benefitting from loan waiver?

Given this background it is indeed intriguing that to garner votes every party continues to announce schemes that are so destructive to the institutional fabric. Why do parties do this? One of the arguments extended is that such schemes are "populist" in nature. If the scheme is benefitting only 40% of the rural population that are cultivators, and within them, 60% of the people who are indebted to institutional sources, and given that they generally are better off with relatively larger land holdings, then where does populism stand? A large part of the cultivators are out of the realm of institutional credit. They do not directly or indirectly benefit from this scheme and can see through the hypocrisy of the promises
made by the political parties. The promise of reduction in interest rates is one of the most ludicrous promises to be made. Therefore why would the rural masses vote based on such a promise? Why then are our politicians so oblivious to these ground realities?

Our political class has obviously not learnt anything from the success of microfinance where interest rates are incidental, while access to formal credit is given priority. What is the use of cutting interest rates on loans that can never be accessed? Would it not make better sense to assure access than a concession on a non-existent service? The example of the Gujarat government on power supply should be a lesson to political parties, where an assured power supply has brought people to willingly pay, and has also surprisingly voted back the same party to power.

The Reserve Bank and the state have taken several initiatives in fostering financial inclusion. One of the measures has been to ensure that wages to be given under the National Rural Employment Guarantee programme is to be disbursed through a bank account. The target is to ensure that every household has an active bank account. With the waiver programme, the state is now ensuring customers stay away from banks. In fact a NABARD committee had recommended that if a relief to the farming committee was to be given, it should be through a scheme of one time settlement by calling them to the bank branch and assessing the real need of each beneficiary. The committee had also recommended that the compensation to the banks was to be released by the State only after ensuring that the borrowers had got a fresh loan. By this count the banks and co-operatives could have worked towards retaining their customers. But the announcement of waiver and the interest subsidies announced in the manifestos of political parties only guarantees the poor's exclusion from the banking system. By following this trend, a few years hence, it will become inevitable for the state to devise a wholly new restructuring package for the rural financial sector.

Financial services must be provided; they are to be provided to the poor, to the agriculturalists, to the rural populace. This job is that of the financial institutions and it is better for the State to leave this job to the specialists and focus on the larger welfare of providing health services, education, roads and infrastructure and take up several other socially useful productive work, which not only makes farmers, but others also happy.

A snapshot of history of competitive destruction of rural financial institutions

The first big event that started the tragedy of rural finance can possibly be traced to 1989. However, different governments had given ominous signs that such a tragedy would occur. The rural credit policies between the decades of 50s and 60s were possibly forward looking. The All India Rural Credit Survey [Gorwala Committee] and the decennial All India Debt and Investment Surveys had indicated that a significant share of the credit in the rural areas was being met by the informal sources, particularly the money lender. The share of institutional credit was small in the overall pie of rural indebtedness. It was in that context that the Gorwala Committee had recommended state partnership in the field of rural co-operatives. A significant part of the rural credit policy was rooted in the recommendations of the Gorwala Committee in the 50s and the 60s. In the decade of 70 we saw the nationalisation of commercial banks, resulting in an increase in institutional credit in rural financial sector. There were two elements that were going hand in hand with the policy of state driven push to the financial services:

1. For every licence to open a branch in an urban location, the banks had to open 4 other branches in unbanked locations.
2. Not less than 18% of the net bank credit had to be compulsorily given to agricultural sector, and 13.5% of it had to go to agriculture "direct".

While point 1 above was given up in the early 90s [with the overall economic liberalisation programme], the second policy intervention continues even now. [The current branch licensing has reintroduced such a conditional branch expansion policy, though with a much liberal ratio]. This policy has been good. Now, the problem begins when the policy shifts from provision of adequate financial infrastructure to interference in modes of policy implementation. This is where the decline of the lofty State intent becomes evident. Significant milestones in the policy decline have been:

1. The Integrated Rural Development Project loans that were designed centrally [and possibly not relevant in many areas where they were disbursed] and forcibly implemented though banks and co-operative societies.
2. The Loan Mela programmes organised by ministers in several places.

With the above two programs, the formal financial sector ended up extending loans to the rural populace for purposes not voiced and possibly for purposes that were irrelevant. These programs became such a tragedy that Al Fernandes in his book indicates that the "loans" acquired the meaning of grants that were not to be returned. A fall out of the above trend was that the co-operatives no longer remained co-operatives, but became arms of the State. Banks distributed money to the pressures of loan melas. This scheme was a strong blow meted out by the State on the rural financial system. Loans were treated as government grants, the people who paid looked like fools, while the defaulters benefited. While the effect of this could [as in the case of the current loan waiver] not be measured immediately, the next decade proved quite costly to the State with the subsequent decline of the co-operatives, and the Regional Rural Banks incurring losses and several commercial banks taking a hit.

With the onset of liberalisation and opening up of the Indian economy, the banks were given a fair amount of autonomy. By having a policy that 40% of the net bank credit had to go to priority sectors and 18% of net bank credit had to go to agriculture, the State
ensured that the availability of credit to agriculture would grow at least at the pace of the overall availability of credit per se. While after 1991 the state had taken a few steps forward with regard to how rural/agricultural banking is done in this country, the dawn of the 21st century seems to indicate that the State wanted to rapidly take a few strides backwards!! The country had to pay a price in the decade of 90s for the policies followed in the decade of 1970. It started with the restructuring of commercial banks by recapitalising them. The banks were then able to stand on their own feet and fulfill their responsibilities. So post 1991, we see that the banks largely assume responsibility for their performance, talk about their profitability and are actively tracked in the stock market. Commercial entities are expected to behave in this manner and be active participants in the commercial world. After the commercial banks, it was the turn of the Regional Rural Banks to get an overhaul. Once the state put in the recapitalisation package, the widespread expectation was that it would no longer interfere in the day-to-day functioning of the commercial entities.

Therefore when in 2002-03 the Vaidyanathan Committee was appointed to look at the co-operative sector, one was expecting that the State would also do its bit of damage repair for this sector as well, before withdrawing. One of the justifications given by the Vaidyanathan Committee was that since the State was responsible through its interference in the co-operative sector to correct the situation through an investment of around Rs. 15,000 crores, this was seen as a one time investment. The precondition for this package was autonomy for the co-operative sector. In fact the Committee had specifically made a mention about loan waivers and its devastating impact on the financial systems. But the state never takes the reports of such committees in its entirety for implementation.

M.S. Sriram, Professor
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mssriram@iimahd.ernet.in

Dear All,

The magazine has been receiving encouraging reviews and feedbacks from all quarters. This encouragement is our source of motivation to publish further issues. The magazine is taking a non-partisan and non-patronising approach. In the very first issue we have demonstrated our commitment to the quality of the magazine and in the coming issues, the bar will only be raised. However, we received contributions from very few organizations. The investments in the magazine are substantial. As an organization policy, the magazine will mostly depend on contributions from the readers and cross-subsidisation through events and conventions of ALC India, advertisements fulfilling development organizations requirements and only a small part through grant. Therefore, we require each one of you, who is convinced about the relevance of Transforming India for the development of the poor, to take upon them the responsibility to contribute to the magazine.

YES, I WANT TO CONTRIBUTE TO TRANSFORMING INDIA

[ ] Basic Rs. 200 [ ] Recommended Rs. 500

Name:.................................................................................. Organisation: .................................................................

Address:............................................................................................................................. Pin Code:

Telephone:.................................................................................................................. E-mail:

Please find enclosed payment by Cash/Cheque/Draft

Drawn on (name and address of the bank):

Dated:.......................................................... Amount: ..........................................................

............................................

favouring 'ACCESS LIVELIHOODS CONSULTING INDIA PRIVATE LIMITED' payable at HYDERABAD.

Send this contribution form to Transforming India, Access Livelihoods Consulting India Pvt. Ltd.,
12-5-124/1, Vijayapuri, Tarnaka, Secunderabad - 500 017
The 2007 report of National Commission for Enterprises in the Unorganised Sector (NCEUS) states that 836 million Indians (77% of total population) live on an income less than Rs 20/day. The irony is that 50% of this huge number constitutes 92% of our total workforce (457.5 million), which implies that 422.7 million people work and are supporting dependants with income less than Rs 20/day without any job security or social security.
The rapid increase in our population has diminished the availability of land per farmer. Simultaneously, the ratio of the workforce which is dependent on agriculture and non-agricultural work remains more or less the same (62 per cent and 38 per cent respectively) due to slow industrial expansion in the country.

Further, the law of inheritance has split small holdings, leading to increase in uneconomical marginal and small farms and making the owners landless agricultural workers. Most of them are thus forced to migrate to metropolitan towns in search of employment, thereby swelling the number of labour in the unorganised sector. It is thus that the phenomenon of workers in the unorganised sector came into being. As stated above, this number (422.7 million) represents workforce engaged in unorganised sector. As per NCEUS, unorganised sector can be defined as all unincorporated private enterprises owned by individuals or households engaged in sale and production of goods and services operated on a proprietary or partnership basis and with less than 10 employees.

Accounting for 92% of our work force (See box: What is the count and what is contribution?), unorganised sector contributes a whopping 60% to the country’s GDP. Considering their large number and huge contribution to economy, it is an irony that their earnings and access to social security are abysmally low. Before we explore the reasons for state’s apathy, it is important to know this large workforce, the nature of their occupations and issues they face.

### Usage of term unorganised or informal sector workers

The workers mentioned in above given categories are classified as “unorganized sector” and “informal sector”, the two terms often used interchangeably. The distinction between the two is difficult to define. The Employment Market Information (EMI) Programme of the Directorate General of Employment and Training (DGET), Government of India, defines the organized sector as comprising all establishments in the public sector and those establishments in the private sector which employ ten or more persons on any day of the reference period (usually three months). All other economic activities, by implication, could be considered unorganized. In common parlance, informal sector activities comprise those which are not (a) organized systematically; (b) made formal through mandatory registration or license (c) covered by legislation to protect minimum labour standards in employment and (d) unionized. Thus it is quite logical that an informal enterprise will employ unorganised or informal labour. However, it has to be remembered that all activities in the organized sector are not necessarily organized systematically and employment beyond a certain number in any one enterprise does not automatically guarantee protection or better labour standards. Similarly, the apparently unorganised sector is not strictly unorganised in terms of structure, management and legality, as proved by ILO:

<table>
<thead>
<tr>
<th>Myths</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>All people engaged in informal activities are poor</td>
<td>Many unorganised sector operators and workers are indeed poor, but available empirical evidence has shown that the unorganised sector as a whole is not synonymous with poverty. It has a highly heterogeneous structure: the very poor are engaged in subsistence activities at the bottom of the ladder, while at the top there are some very profitable economic ventures. In many cases those active in the latter earn incomes well above the minimum wage in the formal sector of the economy.</td>
</tr>
<tr>
<td>The sector is unorganized and unstructured;</td>
<td>Unorganised sector activities are far from being unorganized or unstructured. It has its own mechanisms and networks of financial services, training, marketing, welfare schemes and social safety nets. These rely largely on traditional, kinship, neighbourhood, occupational and family ties and these have proven effective and durable.</td>
</tr>
<tr>
<td>Informal activities are illegal</td>
<td>It has become clear that the illegal situation in which many unorganised sector workers may find themselves is due to the non-applicability of existing regulations to the economic conditions of informal sector activities and lack of knowledge of the regulations, rather than to any outright desire to circumvent the law. Moreover, most of the subsistence and micro-businesses operate at the periphery of or beyond the law because of the unaffordable costs that compliance with existing regulations would impose on their economic activities, putting at stake their ultimate survival.</td>
</tr>
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</table>
Constitution of unorganised sector

According to the definition of International Labour Organisation (ILO, 2002), unorganised sector comprise:

- **Own-account workers in survival-type activities**: vendors of vegetables, fruits, meat, fish, etc., and of non-perishable items like locks, clothes, vessels; garbage collectors, rag-and scrap pickers; head-loaders, construction and agricultural workers, rickshaw- and cart-puller.

- **Paid domestic workers**: maids, gardeners, chauffeurs.

- **Home-based workers**: garment makers, embroiderers, incense stick rollers, bidi-rollers, paper bag makers, kite makers, food processors.

- **Self-employed in micro-enterprises**: road-side mechanics, barbers, cobblers, carpenters, tailors, book-binders, owners of small stalls and kiosks.

Need of social security for unorganised sector:

In India, one of the key features of unorganised sector is prevalence of agriculture based occupation (agriculture, livestock, forestry, fisheries, salt work) as the largest employer in unorganised sector, followed by construction, employing 21% of total unorganised workers. In terms of nature of employment, 62% of the total workforce is engaged in self-employed activities. Dependence on agriculture based occupations (which in turn is heavily affected by monsoon) and self-employed nature of employment, together these two factors make the working environment for unorganised sector workers very vulnerable. The unorganised sector is marked by excessive seasonality of employment, fragmented and scattered workplace, absence of formal employer-employee relation and finally high caste and community based stratifications (highly prevalent in rural areas).

As a result of these factors, unorganised sector workers suffer exploitation in terms of poor working conditions, inferior terms of employment (low wages, absence of pension and work rights) and absence of legal protection (insufficient attention from trade unions who are mainly involved with organised sector workers); as discussed in detail in Defining decent work by A.T.M. Nurul Amin.

India had traditional but informal models of providing social security and social assistance in form of self-sufficient village communities, access to common property resource, joint family system and to some extent the practice of making endowments to religious and charitable institutions. In post independence era, in socialist economy, the role of state became prominent in ensuring social security to its citizens engaged in unorganised sector. However in wake of unplanned industrialization and urbanizations, these informal arrangements underwent irreversible erosion and government also failed to provide a substitute arrangement to the large mass engaged in unorganised sector.
Role of state in providing social security to unorganised sector

At the time of drafting Indian constitution, social security was given due importance and was made concurrent responsibility of central and state government. However, contribution by acts such as Workmen’s Compensation Act (1923), the Industrial Dispute Act (1947), the Employees State Insurance Act (1948), the Minimum Wages Act (1948), the Coal Mines Provident Funds and Miscellaneous Provisions Act (1948), the Employees Provident Fund and Miscellaneous Provisions Act (1952), the Assam Tea Plantations Provident Funds/Scheme Act (1955), the Seamen’s Provident Benefit Act (1961), the Maternity Benefit Act (1961), the Contract Labour Act (1966), the Payment of Gratuity Act (1972), the Building and Construction Workers Act (1996) has been negligible in protecting unorganised workers and has remained limited to organised workers. Apart from these acts, there are other models of ensuring social security to unorganised sector (See box: Social security models for unorganised sector). These models however are occupation and region specific and deal with only partial aspect of social security. For example, centrally funded social assistance programme provide employment but only for a limited duration; most of the schemes started by state governments deal only with pension and retirement benefits. Secondly, the welfare funds started by state and central governments in collaboration with employers follow the charity approach and lack the vigour in enforcing the rules. The centrally funded schemes like NREGA though create employment and prevent migration to certain extent; its application in providing social security is still questionable. Thus we find that existing government schemes is not comprehensive to meet all the aspects of social security applicable to all the workers in unorganised sector.

With this view, in 1999, the Second National Commission on Labour (NCL) was asked to propose an umbrella type legislation for workers in the unorganised sector. Based on the Commission’s recommendations, the Government launched the ‘Unorganised Sector Workers’ Social Security Scheme, 2004 on pilot basis in 50 districts. The scheme provided three benefits such as, old age pension, medical insurance and accidental insurance. However, the scheme was not found viable as it had no statutory backing, it was voluntary in nature and the contribution from the employers was not forthcoming. In 2006, on examining problems of enterprises in the unorganised sector and available social security system, NCEUS submitted a report with recommendations on expanding social security coverage in unorganised sector.

Social security models for unorganised sector

- **Centrally funded social assistance programmes:** These programmes include the employment oriented poverty alleviation programmes such as Swarnajayanti Gram Swarojgar Yojana, Jawahar Gram Samridhi Yojana, Employment Assurance Scheme and more recently National Rural Employment Guarantee Act (NREGA). National Social Assistance Programme (NSAP) comprising old age pension, family benefit and maternity benefits to address the social security needs of the people below poverty line.

- **Social insurance scheme:** The social insurance schemes include several schemes launched by the Central and the State Governments for the benefit of weaker sections through the Life Insurance Corporation of India and General Insurance Corporation of India. There are schemes for the employees of shops and commercial establishments and other weaker sections. ‘Janshree Bima Yojana Yojana’ is a group insurance scheme and covers natural/accidental death, partial or total permanent disability due to accident and the people below poverty line and marginally above are eligible to join the Scheme. Another group insurance scheme for the agriculture landless labour, ‘Krishi Shramik Samajik Suraksha Yojana-2001’ launched in July, 2001 provides for pension and insurance besides providing money back. The contribution of the beneficiary is Re.1 per day while the Government contributes Rs. 2/- per day.

- **Social assistance through welfare funds of Central and State Governments:** The Government of India has set up five welfare funds. Central funds are administered through the Ministry of Labour for the beedi workers and workers in certain other occupations for whom no direct employers-employee relationship exists and is implemented without any contribution from the Government. The scheme of welfare fund is outside the framework of specific employer and employee relationship in as much as the resources are raised by the Government on non-contributory basis and the delivery of welfare services is effected without linkage to individual worker’s contribution. These funds are constituted from the cess collected from the employers and manufacturers/producers of particular commodity/industry concerned.
and technical, marketing and credit support to these enterprises. Based on NCEUS report, The Unorganised Sector Workers Social Security Bill 2007 was formulated which would be re-introduced in parliament in the monsoon term. (See box: The Unorganised Sector Workers Social Security Bill 2007- Features and critique). The bill has been delayed by government due to the high cost (Rs 35,000-Rs 40,000 crore) it would entail. Trade unions are also unhappy about the Bill in its present form as it simply lists the enabling provisions for the unorganised sector workers, but has no specific details about implementation and modalities of payment, making it a toothless bill.

**Social security in new economy**

With coming up of globalization and liberalisation, increased mobility of capital has given an unprecedented leverage to informalisation of labour. Companies are drawing from the existing pool of labour as and when they require, without any commitment to provide permanent employment or any of the employee-supporting benefits associated with permanent jobs. Government in a bid to attract foreign capital is also hesitant to reform labour laws. One can further observe government's apathy towards unorganised sector in recent issues of land acquisition process in SEZs, slum rehabilitations in urban areas, mismanaged health and public distribution system and absence of structural reforms in agricultural sector. All these issues, if handled well can provide the much required subsistence to unorganised sector.

Considering the huge number of workers involved in unorganised sector and quantum of economy created and supported by them, one thing is clear that any reform aimed at protecting and promoting the cause of unorganised sector can not be handled by any one agency, be it government, trade unions, companies or civil society. Also there is no clear cut solution to the range of problems faced by this sector, due to its diverse nature. However, there have been many interventions done by various agencies like companies, NGOs, trade unions and civil societies which can be clubbed under two categories:

- Organising/formalizing the unorganised workers
- Leaving primary activities as unorganised and formalising the next level of supply chain/value chain

**Organising/formalizing the unorganised workers**: These kinds of interventions basically involve bringing a set of unorganised workers into the ambit of organised institutions. The recent example is of retail industry where a large number of corporates are training vendors and employing them at their retail outlets. Thus a share of benefits accruing from increased pace in organised retail is being given to vendors who would have otherwise lost their livelihoods. Similarly a large number of corporate are sourcing agricultural produce directly from farmers, without going through a middleman and thus benefiting scores of unorganised farmers with improved margins.

There are also instances where NGOs have taken initiatives to organise unorganised workers. In this context, Ahmedabad based *Saath Livelihood Services (SLS)* has launched different services like Home Managers, Housekeeping, Security Services, Placement Services and Affordable Meals with different brand names. The vision behind SLS is to generate entrepreneurs along with the employment for unprivileged with
assurance of high quality services to the clients. Under this system if the program needs to be replicated by another NGO or individual in another place or city Saath Livelihood Services gives them a franchisee.

In both the cases, the reach of these interventions remains limited. The reasons are commercial viability of these interventions.

**Leaving primary activities as unorganised and formalising the next level of supply chain/value chain:**

Under this kind of intervention producers/service providers remain unorganised at primary/production level, while the next value chain/supply chain is managed by an institution. It involves organising unorganised sector workers into trade unions, cooperatives and societies.

In case of **trade unions**, the central union organisation (CTUOS) have drafted various strategies and programmes for organizing workers in the unorganized sector and to take up issues and concerns relevant to these workers for policy resolutions. The main components of the strategy are: (a) to create organizing units in the union federation for informal sector workers and provide fresh guidelines to existing unions; (b) extension of legal aid to informal sector workers; (c) demand that a commission for informal sector workers be instituted and a comprehensive bill for this sector enacted. The BMS claims that as a result of its demand, the government added unorganized sector workers to the terms of reference of the Second National Labour Commission. (d) organize various forms of public demonstrations to sensitize the societal agencies about the problems of unorganized sector workers.

Finally, the legal battles relating to contract labour abolition and regularization, action at various levels (social, policy-making bodies, international forum) to deal with the problems of child labour and other issues by the union federations constitute their interest around the unorganized sector. There is also instance of creating new trade unions specifically for unorganised sector workers, e.g., Self Employed Women Association (SEWA). SEWA organizes home workers, street vendors and waste pickers and has more than 200,000 members covering four states in India. Though registered as a trade union, it offers a number of services like micro credit, vocational and training programmes, pensions. Similarly, there are many trade unions started by Baba Adhav in Maharashtra for unorganised workers, as discussed in detail in by Archana Londhe on page number.

**Cooperatives** is one institution form where the problem of reach and replicability can be solved. The case of AMUL is a relevant example, where milk producers remain unorganised at production level, but the produce is processed and marketed in a three tier structure. Similar interventions have been successful in case of sugar and fishermen’s cooperatives.

**Society** is again another institutional form, where primary producers can unite under umbrella of a society and scale up the marketing process thus benefiting from increased margin. The example of Barpeta Fisheries Society is a successful intervention, where society handles the order processing and distribution part of the supply chain, while fishermen receive increased margin as per their produce.

Though all the three forms have wider reach but still they can not be considered as final solution. The reason being all of them require one instrumental person/organisation which can bring the scattered workers to a critical mass where the impact of intervention can be made possible.

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Since its coining in the early 1970s, the informal sector has been widely used in the urban development literature to denote economic activities or work opportunities which could not be called decent employment as was expected from an urban-industrial sector propelled development, urbanization and modernization.

With gaining of more knowledge, experience and lessons learned from numerous studies on the informal sector, ILO finally seems to have found a way out with the informal sector dilemma. It has pledged itself since 1999 to work with other international development agencies, national governments, trade unions and employers' associations, particularly in the developing countries to turn the informal sector into decent work. An ILO commissioned study has formulated strategies for reducing decent work deficit in the sector and, thereby, contributing to poverty reduction. These strategies include:

Work Rights

The most fundamental need is recognition of every one's 'right to work'. The minimum that the cities and national governments can do is to recognize the informal sector work as legitimate work of the poor. This perspective arises from the reality of extreme paucity of formal private or public sector jobs for the poor with limited skills and almost no education & assets. However, it cannot be limited to that only. In addition to the recognition of right to work, governments need to promote 'rights at work', which refers to workplace related rights. The employers are obliged to allow the rights of workers to organize themselves to bargain for better wage and working condition. Right to work and

(e.g., waste workers in the open dumping sites, child labour as apprentice in the informal workshops, etc.) associated with work in the informal sector.

Since then the informal sector's labour has been studied from a labour market perspective and their enterprises from market 'structure-conduct-performance' perspective. At the very outset, it was however pointed out that the ILO enthusiasm centering the sector is unjustified given (i) crude labour exploitation in the sector and (ii) the role it serves as an 'industrial reserve army', thereby, reducing the wage rates in the formal sector. As a result, ILO the custodian for ensuring labour welfare and harmony in tripartite relations among employees, employers and government faced a "dilemma" with the sector. The huge role of the sector in urban labour absorption - in many cities of developing countries 40%-60% of the urban working labour are engaged in the informal sector - vis-à-vis job insecurity, low productivity, low income, labour exploitation, unacceptable working condition, health hazards

Waste picking is considered as one of the dirtiest work among all jobs in informal sector.
rights at work together give strong enabling mechanisms respectively for (i) reducing harassment of informal sector enterprises and workers by law-enforcing agencies (e.g., police) and/or local touts and (ii) improving the working and living conditions of the informal sector workers.

Enterprise development

One reason of very low income from informal sector work is its low productivity. An enterprise development strategy (with provision of credit, training, market information, technological innovation) coupled with water, sanitation, health and educational services is key for raising productivity of the informal sector work and thereby income of its labour.

Social security services

In this era of losing rights by workers because of weakened trade union movement and rise of flexible enterprise system (as reflected in the expansion of subcontracting and piece-rate work), it will not be easy to expand social security system to the informal sector. Innovative mechanism of social security services needs to be explored by organizing the informal sector workers (SEWA in India is a good example in this regard). Organizing the informal sector workers by the formal sector trade union leaders (with support of ILO and the left-wing political parties) is essential to provide social security services to the informal sector. Progress in social security should occur incrementally with the level of national economic development and pace of economic growth.

Reducing occupational hazards:

Informal sector labour and enterprise involvement in providing urban basic and environmental services is rapidly growing in the developing country cities. This is an opportunity for creating jobs for cleaning up the environment in general and providing the basic services in particular. However, the danger associated with this opportunity on the part of the informal sector workers is their exposure to health hazards. Good examples and practices, however, do exist, e.g., provisioning of protective gears to the ‘tokais’ (informal waste collectors and separators), by Waste Concern, Bangladesh, for reducing their exposure to health hazards while working in the primary waste collection points or open dump sites.

Physical integration and accommodation

Most perilous aspect of the informal sector work arises from its spatial non-existence in the urban planning tools (master plan, structure or comprehensive plan, land use plan, etc.). This situation leaves with no legitimate space for the informal sector workers in the urban built-environment. As a result, evictions of informal sector labour from their workplaces and shelters for living (usually slums or as squatters) are widespread in all developing country cities. Perera (1994) has shown, on the basis of a study in Colombo, Sri Lanka, how the informal sector enterprises can be accommodated by utilizing the ‘urban voids’ or ‘blind lands’. Perera and Amin (1996), Amin (2000, 2002) have documented similar cases from other Asian cities. Mainstream urban planning however is yet to be tuned to the vast presence of the informal sector reality in our cities.

Stopping inter generational transfer of poverty

Of all needed policies and strategies for the informal sector, the most crucial and urgent one is to bring an end to children’s work in the informal sector. In the absence of this, a waste picker’s child becomes a waste picker, a rickshaw driver’s son becomes a rickshaw driver and his daughter becomes a maid, a maid’s daughter becomes a maid and her son a rickshaw driver or a tokai. This is the most alarming prospect: a modern version of traditional occupation-based caste-system.

The above prospect need to and can be overcome by making use of the observed positive or synergic relations between the informal sector work and environmental services. This synergy can be reinforced by public policy and actions. The starting point ought to be: instead of viewing the informal sector as a problem, it should be part of the solution. If the global declarations (as they are in the Millennium Development Goals) on poverty reduction are made a little real by directing some financial resources to invest for the strategies outlined above, the informal sector’s on-going role in providing an income-earning opportunity will not lead to perpetuating poverty. Rather, such investment bears the potential of creating a virtuous cycle: an increased productivity will lead to a better income, which would increase affordability to pay for shelter, water and sanitation; hence, an improved access to these services and thereby an improved living will ensure, hence, higher productivity and better income.

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There is vast scope to improve skills in various kinds of repair work.
The Wikipedia’s definition of the informal economy is as follows: “The term informal economy refers to all economic activities that fall outside the formal economy regulated by economic and legal institutions. It refers to the general market income category (or sector) wherein certain types of income and the means of their generation are unregulated by the institutions of society, in a legal and social environment in which similar activities are regulated. Simply put, it is economic activity that is neither taxed nor monitored by a government; and is not included in that government’s Gross National Product (GNP); as opposed to a formal economy.”

A common understanding of the informal economy is of a sector of unskilled & semi-skilled workers such as domestic helps, electricians, plumbers, migrant labour, street vendors, etc. Such a sector is termed 'informal' due to the unorganised nature of the sellers or service providers. Decentralisation of production and consumption resulting in the participation of a large number of people is the hallmark of informal economy. In that sense, it is similar to the Panchayat system in the political governance.

Besides, it may be incorrect to state that the informal economy is one not governed by the institutions of society as implied in the Wikipedia definition. The suppliers of goods and services in an informal economy are in reality more accountable to the consumers with more at stake regarding quality and price; and hence quite responsive to consumer demands. Another observed fact is that the informal economy is more democratic than the formal economy, however democratic the country's government or its laws may be. The informal economy is not, probably, governed by the Government and it is best left that way.

Certain people even label Special Economic Zones (SEZs) in and around big cities as part of the informal economy, reasoning that Governments provide them tax holidays for many initial start-up years exempting these industries from the 'social' laws that normally govern business establishments. Also, many big businesses that pay huge taxes to the Government are not really regulated or monitored by it. Only in a matter of speech can one say that the Government can monitor them. In any case, let us discuss the informal economy in a pure, conventional sense, leaving such concerns out of our discussions.

Strengthening the informal economy is a more efficient and sustainable strategy to eliminate poverty, increase employment and improve the living conditions of the underprivileged. Making all the economic activities formal, collecting taxes and monitoring their performance at a very high cost, and then using the tax money on development activities in our villages is a circuitous way of doing things. Many governments have exempted products made by Self Help Groups from Sales Tax, thereby giving them an edge over the products marketed by the 'formal' economy. Similar incentives should be provided for the services sector as well. We can draw the analogy of Small Scale Sector in manufacturing industries also to informal economy. As the Government had reserved the manufacturing of certain goods for the small scale sector, trading in certain goods and services can be reserved for the informal economy.

Consumers are also at an advantage when dealing with the informal economy as competition is observed to be more perfect in an informal economy than in a formal economy. In a pure formal economy, pricing decisions (in fact, most decisions) are centralised and the final
person dealing with the consumers is just an employee with limited discretionary powers. But, in an informal economy, consumers normally deal with the owner of the establishment who has all the decision making powers. So, at least theoretically, the consumers can obtain a better bargain in an informal economy.

The informal economy is also more eco-friendly as producers and service providers in an informal economy reach out to consumers in their immediate neighbourhood. In that sense, it minimises movement of goods and people cutting down greatly on carbon footprints. An example can be the flower industry where the formal industry deals with international trade in cut flowers exporting to Europe. However, what we observe in local markets are the thousands of women selling small jasmine flowers and bands from whom people purchase daily to meet local needs. No air miles (flowers come from the nearby farms or markets in cycles) and no refrigerated containers (they keep sprinkling water) are required. More importantly, it boosts the local economy and spreads wealth, resulting in a more equitable society.

Another important aspect of the informal economy is the lack of big scale advertising & marketing activities that have become inevitable in formal economic activities. Activities like sales promotion, special offers and discount sales do take place in the informal sector also but they are more personalised and context specific. Moreover, there is one marked difference. Goods and services offered by the informal economy are based on the actual needs of the people. Marketing goods and services targeting 'perceived needs' and creating new needs are done only in a formal economy, which uses mass media communication. Players in informal economy depend mainly on word-of-mouth promotion.

In the past, voluntary agencies focussed on political and social issues affecting people. Today, however, Non Governmental Organisations and other development organisations are focusing more and more attention on economic issues of the poor and underprivileged communities. Through experience, NGOs have learnt that understanding the dynamics of the economic initiatives of the target population is crucial for their upliftment.

There are lakhs of SHGs which have been organised during the last decade, with a primary focus on credit and savings though a limited number of them are engaged in other production / service sector activities as well. If the SHGs had remained true to their name and principle, they would have remained in an informal economy mainly helping each other in times of crisis. But, almost all the SHGs have been linked with the formal commercial banks of the country, thereby bringing them into the realm of the formal economy. When this happens, the dynamics change and the rules are defined by extraneous factors and players. Despite the rhetoric, a mutual help activity then is transformed into a mechanism through which the dominant players of the formal economy reach out to more consumers of their goods and services.

Similarly, we get to see many development organisations organising lot of small producers (in agricultural or horticultural or artisanal sector) and linking them with the big retail chains. In the short term, this may appear a good strategy even from the view of the producers. For the retail chains, of course, this is the best that could happen- others are investing money to organise their procurement operations! But, if we consider issues like local economy, energy efficiency, decentralisation, equitable distribution of wealth and other such issues, this strategy will not help address the issues of poverty alleviation and structural change in our society.

On the other hand, community groups can be organised to undertake economic activities that produce goods and services for local communities, for which raw materials can be locally procured. For example, when a SHG starts a shop, it encourages other local businesses by procuring locally produced goods that other SHGs may produce like soaps, edible items, fruits and vegetables etc. Many requirements may be met only from the 'formal' economy, but local produce and services can remain a significant portion of such outlets. This is the only way by which we can ensure growth & sustenance of the lakhs of small producers and service providers in our country.

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In rural areas, the distress push in livelihood options, has forced rural households to shift to non-farm sector. A large body of literature also argues that the occupational shifting of rural households is seen to have more in favour of non-farm economic activities. Further a mixed response has been observed that these livelihood options are associated with casualisation of labour and are driven by the seasonal and temporary rural town and rural urban migration. Against this backdrop the present article has made an attempt to understand theoretically the constraints and challenges in pursuing non farm activities in the context of India.

Livelihood options are quite diversified and vary over the space in rural areas. It is mainly the household capacity of income, asset base, education, skill, influential contact, mobility and credit access which determines to undertake the type of livelihood options by the households. It is however apparent that livelihood options are driven by two factors such as ‘demand pull’ and ‘distress push’. In former case household tries to go beyond mere consumption and livelihood, rather responds to new opportunities. While want of adequate on farm opportunity, inadequate farm output, land constraints, risk of farming, lack of irrigational facilities and lack of marketing linkages for agricultural produces are the important factors which drive to poor household to seek non-farm employment. In most developing countries, the drawback in the real operation of the dual sector approach is well visualised in adverse terms of trade, realizing the problem of unemployment and livelihood in rural areas, high incidence of out-migration of rural labour force to urban areas in search of employment and avenues of income.

Considering the limited capability of agriculture sector in providing gainful employment to increasing rural labour force and sustainable income to the farming households it would be necessary to initiate the suitable environment in exploring the potential non-farm economic activities. The diversification and growth pattern of different non-farm activities are directly or indirectly, influenced and determined by various fundamental factors across the region. But the nature and level that various factors influencing to the structure and growth of these activities tend to vary according to the socio-economic characteristic of households and the location characteristics of the non-farm unit. However, the overall contribution of different non-farm activities, especially manufacturing sector has been well recognised in terms of both providing employment opportunities to the labour force, thereby reducing the pressure on agricultural land as well as the problem of unemployment and the generation of income of rural households, especially those possessing smaller size of land holdings or no land for cultivation.

However, at the household level, wide arrays of constraints have been identified by various authors, which stumbles the growth and promotion of non-farm activities in India. These constraining factors can be consolidated and discussed broadly under seven heads such as (1) raw materials and its procurement and management, (2) Technologies & Upgradation, (3) human capital endowment, (4) Investment and maintenance of Physical Infrastructure, (5) competition, market & prices, (6) Policy & Programmes and (7) social and spatial segmentation.

Timely availability of raw materials in appropriate quantity, desired quality and efficient uses are more often questioned in the rural set up. The promotion of rural non farm activities get halted across the different parts of India due to timely non availability of inputs, inefficient uses of resources, hiked prices of raw materials and procurement practices. Numerous studies have proven that technological upgradation and human capital endowment of the non farm enterprises have direct bearing on the return on investment. However, non farm sector in India is still struggling in absence with not much innovation, application of traditional left over technologies, manual mode of operation, little effort on joint ventures and absence of techno functional synergies with the industrial and educational institutes. Entrepreneurs, innovators and workers engaged in this sector are possessed with inadequate skills, exposure to information and knowledge and access to formal training. It is also more often observed that financial assistance is given to entrepreneur to start non farm
activities by the formal financial institution, without imparting necessary training or without judging the existing skill sets of the promoter.

Challenges before non farm sector in India
The story of non farm sector challenges are also linked with the dismal status of infrastructure and communication network in India. Dismal road and other communication network, inaccessibility of electricity to many of the non farm units and poor industrial culture (i.e. product design, quality management, packaging, branding, certification etc.) have been the one of the marked challenges for the promotion and propagation of non farm activities in India. Further to that resorting to inappropriate and unorganized markets, inelastic output, timely and qualitative input supply, high input prices, inappropriate pricing, stiff competition from the most organized and big industries, lack of innovation and trade practices have led to vanishing of traditional non farm activities across many parts of India.

The challenges of farm sector are also an unending one, which goes on and on. The crumbling down of non farm sector in a way attached to the government policies and programmes. In the absence of unified and appropriate non farm policy, inadequate provisioning of formal credit to the entrepreneurs, lack of marketing support, unfavorable business environment, inadequate entrepreneurial development programmes, inefficient and unsuitable tax expenditure policy of the government have also been the stumbling block for the promotion of non farm sector in India.

Over and above social stigmatization is also playing another role in the progress of India agriculture. The access to rural non-farm activities are restricted on the basis of place, caste, education, income and many more factors. While good and accessible places are endowed with basic services and can earn the opportunities, keeping far off the inaccessible place household. It is the greater mobility of high caste people who can earn the opportunities out of their influential contacts while it restricts to lower caste households. It is the high educated and high income level and skilful household who can earn the opportunities by involving in non-farm activities, compared to less educated, poor and unskilled households.

Considering the limited capability of agriculture sector in providing gainful employment to increasing rural labour force and sustainable income to the farming households it would be necessary to initiate for developing a long term policy approach towards the development of various potential non-farm economic activities. It is concluded here that the non farm sector in India is facing a wide array of stumbling challenges, which can be strategically overcome by public and private intervention. Government should have policies to improve education and skills of the entrepreneurs and workers. Further government should find the way out to appreciate the importance of financing small enterprises in rural non farm sector, appraise the entrepreneurs in an objective and systematic manner, develop skills for documentation and monitoring of such advances, more number of promotional schemes of various agencies for development of the sector. Apart from that the investment and maintenance of hard and soft infrastructure, suitable business environment, formal credit extension, and technological innovation should be in place so as to promote the non farm activities across different parts of India. By doing so it would be an instrumental measure not only for creating off-farm employment opportunities and raising the level of income for rural households but also to strengthen the base of the farm sector and in turn bringing reduction in the rate of out-migration of rural household to a certain extent.

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Hyderabad, trilochanthripathy@yahoo.com
The traditional skills among tribals are of immense value to the society only if they are being assisted and channelised. Irula Snake-Catchers Industrial Cooperative Society (ISCICS) is a shining example. Their skill of catching snakes has helped them to establish a thriving venom cooperative and make a living out of it. The skill which was previously used for hunting of snakes for their skin has been converted to a boon to the society for producing anti-venom and helping to conserve the snake population of the area.

In 1972, Chennai Snake Park was started with the help of Mr. Romulus Whitaker, an American herpetologist to provide employment to the Irulas. The snake park was failing to provide the right alternative to the lucrative snakeskin trade as the park was maintained through mere entrance collection.

At this stage Mr. Romulus Whitaker and Smt. Revathi Mukharji, a social welfare activist, approached registrar and decided to set up a cooperative in which the traditional skills of the Irulas could be used for conservation of snakes and for production of snake venom. Thus Irula Snake-Catchers Industrial Cooperative Society (ISCICS) was established in 1978 with 25 members. This was primarily undertaken:

- To ensure that sufficient quantities of snake venom were available.
- To ensure that the protection given to snakes under the Wildlife Protection Act was in no way compromised, i.e., snakes caught in the wild for purposes of extraction of snake venom needed for medicinal purposes would be released without harm after the venom was extracted.
- To ensure that the Irula people had a gainful and profitable occupation this at the same time would allow them to nurture the skills that they alone have mastered over the years.

The key objectives of the society are:

- To improve the economic condition of the Irulas by providing sales outlets for their product
- To establish a center for the maintenance of snakes and extraction and sale of venom

Membership qualification

Primary conditions for being a member of the society are:

- She/He should belong to the Irulas community
- Should be able to handle all venomous snakes and qualify through a selection committee
- The member must be in the age group 18 to 58 years of age

A share capital of Rs.50 per member and entry fee of Re.1 is collected from the member.

The State Government licensing authority decides how many Irulas to license and the number of snakes permitted to be caught. This practice, which was started when the Cooperative commenced in the 70s, is still rigorously followed. In 2007-08, 351 licensed members...
of the society collected 8550 snakes. There is a specification on the number of snakes from each species that can be collected. In 2008 out of 8550, 850 cobras, 1500 Kraits, 1200 Russels viper and 5000 saw scaled vipers were allowed. The members are given a specific minimum target of each species of snake and over and above that, if one is collecting upto the licensed number incentive is paid per snake.

<table>
<thead>
<tr>
<th>Name of the Snake</th>
<th>Amount (In Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobra</td>
<td>1500</td>
</tr>
<tr>
<td>Russel’s Viper</td>
<td>1500</td>
</tr>
<tr>
<td>Common Krait</td>
<td>650</td>
</tr>
<tr>
<td>Saw scaled viper</td>
<td>250</td>
</tr>
</tbody>
</table>

**Maintenance and management of snakes**

The Irulas bring freshly caught venomous snakes to the centre for venom extraction. The details such as length, weight, sex and place of capture are recorded at the time of purchase. The purchased snakes from the members are kept in a pit measuring 60’L by 40’B by 7’H. The snakes are kept in mud pots that allow quick and easy handling. The habitat also keeps the snakes cool and keeps infrastructural and maintenance costs low. To detect and prevent premature recapture of snakes, all snakes (except saw-scaled vipers, which, at 30 cm, are too small) are coded by clipping the ventral scales. Records are kept for each of the three larger species. Clipcodes last for six months to two years. The rate of recapture during this period has been found to be extremely low. Of more than 13,000 of the large species that have been caught, only 20 were found to have had the codes.

<table>
<thead>
<tr>
<th>Name of the Snake</th>
<th>Price per gram of venom (in Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobra</td>
<td>23000</td>
</tr>
<tr>
<td>Russel’s Viper</td>
<td>23000</td>
</tr>
<tr>
<td>Common Krait</td>
<td>36000</td>
</tr>
<tr>
<td>Saw scaled viper</td>
<td>36000</td>
</tr>
</tbody>
</table>

**Venom extraction and preservation**

The duration of the captivity of the snakes is limited to four weeks, and venom is extracted only once a week. Care is taken to ensure that the extractor is gentle and careful in pinning and the entire process of venom extraction takes no longer than two minutes per snake. The venom is centrifuged and the pure venom is stored in 10°C in freezer and preserved.

The extracted venom would be dried, packed in air-tight bottles and sold to Indian anti-venom serum manufacturers.

The rates in Table 2 are only if bought in the ratio of 5:5:1:1 (cobra: russel viper: krait: saw scaled viper). However pure saw scaled viper or krait venom would cost Rs. 175,000 per gram.

A weekly report of the number of snakes collected and the amount of venom extracted is submitted to the forest range officer. The snakes, after extraction, are released in the wild in good condition in the presence of the forest ranger.

Except for two years in the initial period the cooperative has been functioning profitably. Over the last seven years there has been a steady increase in the number of snakes licenced to be caught and total value of the venom sold.

**Income to the society**

The society apart from the sale of venom earns its income through industries and other institutions to capture snakes on a regular basis and venom extraction show to the tourists. Rs. 700,000 was collected by these means in 2007.

**Administration**

General Body Meeting is organized twice a year. Seven elected members of the administrative committee manage the society. The President and Vice president and other five members act as the Directors of the society and are elected by the members of the society. There are 11 employees out of whom only 2 members are from outside while the rest all belonging to the Irula Tribe

**Key achievements of the Society**

The society has been able to provide a stable income source to the Irula tribe by optimizing skills and tribal technology that are scarce in the society. It also has given a boost to the dignity of the community and the members of the society. While earlier they were sidelined and considered downtrodden, they are now recognized from their uniforms and are respected for their work.

The careful management of snakes in natural habitats using indigenous methods has not only led to low overheads but has also led to less than 1% mortality of snakes during captivity. Thus the key objective of conservation of snakes is being effectively undertaken. It has also been able to provide steady quality venom for production of anti-venom over years which is a life saving drug for many people. The cooperative is now the largest producer of venom in India.

ISCICS has had an educative role as well. Part of the work of the Irula Cooperative is to publicise the use of anti-venom serum and drive out the fear of snakes and make farmers aware of snakes as “friends of the farmer”.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total members</th>
<th>No. of snakes trapped (in Lakh)</th>
<th>Total Venom Sales (in Lakh Rs.)</th>
<th>Profit (in Lakh Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>209</td>
<td>7500</td>
<td>58.46</td>
<td>28.82</td>
</tr>
<tr>
<td>2001</td>
<td>208</td>
<td>8750</td>
<td>41.59</td>
<td>14.83</td>
</tr>
<tr>
<td>2002</td>
<td>347</td>
<td>13637</td>
<td>35.73</td>
<td>10.51</td>
</tr>
<tr>
<td>2003</td>
<td>352</td>
<td>8850</td>
<td>36.37</td>
<td>8.52</td>
</tr>
<tr>
<td>2004</td>
<td>346</td>
<td>3440</td>
<td>48.33</td>
<td>10.86</td>
</tr>
<tr>
<td>2005</td>
<td>345</td>
<td>3190</td>
<td>87.77</td>
<td>33.06</td>
</tr>
<tr>
<td>2006</td>
<td>345</td>
<td>6300</td>
<td>122.81</td>
<td>21.93</td>
</tr>
<tr>
<td>2007</td>
<td>351</td>
<td>8500</td>
<td>135.88</td>
<td>55.84</td>
</tr>
</tbody>
</table>
Benefits to members
The members are provided all the tools and uniform free of costs by the society. Further the society provides a free vehicle for the transport of the snake from the homes of the members to the society.

The members by working for only 7-8 days a month earn an income of Rs.3000 to Rs.4000 per month. Apart from this apart they are also earning income through capture of rats and frogs that are fed to the snakes in captivity. The other benefits provided to the members are:

- Rs 300 on attending to the call of industries
- 50% bonus every year
- Performance based incentive which varied between 9000 to 22000 in 2007
- 14% dividend on share
- Rs.5000 interest free loans for the construction of house
- Free insurance coverage
- Rs.1000 for funeral ceremony of the member
- Rs.2000 medical allowance per annum
- Rs.1000 educational allowance to children of members
- Treatment expenses on being bitten by a snake and Rs.100,000 on death due to snake bite

Key challenges
As with any enterprise, ISCICS too has its share of challenges. The cooperative is under the control of the state and therefore still there is very little exercising of the autonomy. The control of the special officer and the registrar is high.

There is a constant conflict between the forest department and the cooperative due to the conservation of the snakes. Though the snakes are handled with utmost care since the Irulas know very well that the snakes are their regular source of income, there is criticism of their activity. The cooperative officials opine that work would be much easier with a little more support of the forest department officials. The ban on venom export is one of the key policy that is being challenged by the officials of ISCICS as they feel that there is international community which is waiting to buy quality venom of the cooperative. They feel that even on lifting the ban, there can be prudent business undertaken without actually harming the snake population. Though the snakes are caught in from the field and villages, they have to be released in the wild because of the strong resistance from the villagers. Though snakes migrate back to the habitations because of lack of food in the wild reserve forests there is a possibility of some dying before reaching familiar territory.

Although at present the project appears to have little impact on the populations of target species, actors like changes in snake habitat, prey abundance, snake mortality in captivity, climatic changes, effect of agricultural chemicals on snake populations, and even the numbers of snakes needed for India's venom requirements need to be carefully studied so that the Cooperative and the Government authorities can take proper decisions on the management practices to be followed. Currently the Cooperative does not have the expertise to undertake these kinds of studies and looking for support and technical expertise.

Up scaling and future direction
With a growing demand for venom for both anti-venom purpose and extraction of enzymes, there is a possibility of more Irula tribals getting the license for catching snakes in the near future if larger quotas of snakes are granted by the government. The cooperative realizes that there are more valuable skills of Irulas which can be put to use. The cooperative plans to:

- Establish herbal medicinal plants
- Collect, store from forests and form Gene Banks and sell seeds all over the country
- Manufacture handicrafts of rat skins
- Extract venom from scorpions

Replicability
There are many similar tribal communities across the country who have similar skills. The Irulas can be utilized to educate the other tribes for establishing such cooperatives for venom extraction in the country. Mr. Dravidi, secretary of the society exudes confidence and says that many more such cooperatives will be the key both for sustainable livelihoods of the tribals and increasing demand for venom in the country.

Conclusion
The project has demonstrated that the tribals indigenous and knowledge if put to use can benefit the society at large. These are economical, sustainable and easily adoptable by the tribes with similar skills. Instead of reskilling, the government must realize the key potential of all the native tribes, comprehend their significance in the modern world and effectively showcase it and utilize it.

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This is the story of Debaliapara village of Barpeta district, Assam. The village comprises mainly of migrants who have very little control over the resources. In 1984, due to entrepreneurial efforts of some farmers, the community got involved in the fish trading business. In 1997, to fight police corruption and tackle market constraints, the fish farmers organised themselves into the All Barpeta District Fish Seed Producer Society. Within a span of two decades, the transformation of the Dabaliapara village from a temporary settlement of daily wage earners to an affluent fish farming village reads like a fairy tale with significant learnings for similar interventions which can be applied elsewhere in the country.

Until 1984, the community comprising 500 households in Dabaliapara village worked primarily as labourers in the rice fields and used to migrate to nearby towns during the off-seasons. The wage rate was abysmal, barely enough to provide daily food. The literacy levels were very low. As the community members were considered outsiders, they had very little control over resources.

The transfiguring of the local economy and ecology started with road construction. For the construction of roads, mud had to be dug up from nearby land, which led to the formation of small ditches by roadsides. These ditches filled up during the monsoon which also brought wild fish from the nearby beels. As the number of ponds started increasing, the local hydrology started to change. The beels started decreasing in size and were replaced by disperse settlements and small ponds on the side of the roads and in the backyards of settlements. Most of these ponds had sufficient water lasting for eight months a year and fishing in these ponds became common.

Sowing of entrepreneurial seed

In 1984, a few people from the community entered the fish trading business. They bought fish seeds from Baghbar, carried these fish seeds in water filled drums on their shoulders to the nearby Rangia fish seed market where they sold them. Fish seed was increasing in demand all over even from as far away as Calcutta. Profits were high but the business was considered risky due to high mortality rate of fish seeds during transport. Noor Ali who was one of the earliest fish traders says, “I was given a princely sum of Rs 5000 and a gamcha to go to Calcutta and contact a fish seed merchant. I had to buy few grass carp and silver carp seeds which were in great demand in the Rangia market. I had never received such a huge amount in advance and had never traveled so far to trade fish. I met a lot of fish seed merchants there and befriended one of them. After buying the fish seeds I returned only to lose half the seeds during travel. I still managed to pay back the remaining advance money with me on reaching Rangia market. I did not make a lot of money in the first trip, but I had built up contacts in Calcutta with whom I could trade again.” After this Noor Ali and many other fish traders started traveling more often to Calcutta to trade fish seeds. The lure of making big money with just one trip was a big incentive. The initial seeds of culturing fish were laid down by these few entrepreneurial men who traveled all the way to Calcutta without a clue of what they were getting into.

Gradually, the bunch of fish traders built a reputation of being reliable suppliers for Calcutta's market. They also learnt the technology of fish hatcheries which was prevalent in West Bengal. In 1993, Noor Ali brought...
some Bengali fishermen to Assam and set up the first fish hatchery in Dabaliapara. The first year he earned a handsome profit by rearing fingerlings in a small pond just outside his house. This was motivation enough for nearby farmers to try the technology out in their small ponds. By 1995, nearly 10% of the entire village was involved in the technology of rearing fish seeds. The fish seed business was less risky and also more remunerative than trading fish seeds and daily wage labour. These fish seed farmers started trading fish seeds all over Assam. Fish seed business was a seasonal business starting from the month of April to the month of July after which the fish farmers had to get back to daily labour to earn a livelihood. Some of the fish farmer's cultured fish from the left over seeds stayed in the ponds till the end of December or January. Fishing was semi-intensive in nature and the main focus was on fish seed production. This fish was usually sold on the roadside, as the farmers had not yet found markets for the surplus fish produced. Soon the fish farmers discovered that the fish sold at Rs 40 per kg to middlemen fetched them Rs 100/kg in the Guwahati market. They also realized that there was a huge demand throughout the year for live fish in the Guwahati market which was being met by importing fish from Andhra Pradesh. The Andhra fish was sold in the market for only Rs 60/kg while live fish would fetch more than Rs 120/kg in the market depending on the size and variety of fish. With some training from the Government Fisheries Department, a few fish farmers started culturing fish in their ponds post the seed producing season.

The genesis

Fishing is a seasonal activity, starting in the month of April and continuing till November end. The months from December to March are the lean months when most of the ponds in the area remain dry. For the preparation of the fish ponds and the fish seeds the fish farmers invest their own funds or access credit from the local mahajans at a high interest rate. This credit is paid back from the first harvest in April. The high interest on credit was the main reason for fish farmers to harvest the fish as soon as possible. Also since fish is a perishable commodity, its quick transportation was a big problem. The police demanded huge bribes on each truck ferrying fish which resulted in transportation was a big problem. The police demanded huge bribes on each truck ferrying fish which resulted in poor market. To tackle these market constraints, the fish farmers of Dabaliapara organized themselves under the All Barpeta District Fish Seed Producers Society. There had been earlier unsuccessful similar attempts to organize themselves since 1995. Though the society was functional from 1997, it obtained registration under the Societies Act only in 2001. The logic in forming the society was to assemble all fish farmers and pool risks and transaction costs associated with the transportation of edible fish and fish seeds to the market.

As a society they could prevent the local authorities from harassing them and stopping payment of bribes. On solving the police menace, the next big problem they faced was the low market price due to the demand-supply mismatch. To tackle this, the society decided to trade with only a few traders in the market. Under the newly devised system, the traders sent market specific demand information to the Dabaliapara head office on the evening prior to fish transportation. On the supply side, the members inform the anchalik committee office about the fish available in their ponds for harvesting. The head office collects the information and decides the quantity of fish to be harvested and sent to a particular market the next day. The decision taken by head office is binding on each member and in case of non-conformance; the member may have to pay a hefty fine or be expelled from the society. While deciding on the pond which has to be given priority for harvesting, due importance is given to the advice of the president of the anchalik committee. In case of grievances, the issue is tackled in the monthly meetings of the executive committee.

Services provided by the Society

The society leases 50 trucks for fish transport to the markets. Most trucks are owned by the members. The number of trucks used for transport is important, since it is just the right number needed to transport all the fish harvested by the members during the peak months of October and November. This system has led to full vehicular utilization during the harvesting season and at the same time ensured optimum supply of fish to the markets at good prices. The members of the society have to make a challan of Rs.20 and Rs.50 at the society office respectively on transportation of every truck of fish seed or edible fish. This is the only income generated by the society and a
regular one.

With the reduction of risks at the market end and increasing margins from the and asset holding. The society is also trying to obtain loans from some other banks for its members on favourable terms and free them from the clutches of the local mahajans who charge high interest rates. The society is attempting to set up a fish seed plant in the close vicinity of the village for its members in the coming years. The society has collaborated with the Fisheries Department to train its members in scientific methods of fish farming.

The society has been able to successfully petition against harassment of the fish farmers by the Fisheries Department. The fishery rules states that no fishing for edible fish or fish seeds is to be allowed in the Brahmaputra river. The issue arose when some of the trucks carrying fish from the society were stopped on their way to the market and the fish were dumped in the Brahmaputra River. The fish farmers were later blamed for fishing in the river against the provision made in the fishery rules. The court ruled in favour of the society and has allowed the society to verify whether the fish and fingerlings it supplies to the market has been produced by its members in their fish ponds and issue a certificate claiming the same. This is one of the main reasons why of jealousy arising from the Fisheries Department and other such Government Departments.

**Structure of the society**

Over the years, the membership of the society has grown to 1000 members and they have organized themselves under a federal structure with 18 Anchalik committees under them to streamline the decision making process. Apart from the 1000 members of the society, there are 250 SHG's who carry out fishing. The executive body of the society consists of 38 members. There is one president, two vice presidents, one general secretary, five organizing secretaries, one assistant secretary, one cashier and 27 executive members. Each Anchalik committee is elected by the mutual consent of the members. With the growth in the number of members of the society and in the volume of transactions, there is a felt need among members for free and fair elections for the positions of the executive committee. Till date, no elections have been held to nominate the executive members. The executive body meets on a pre-fixed date every month to sort out member complaints and make decisions on issues relating to the society functioning. All crucial decisions of the society are taken in the executive committee. The tenure of the committee is three years. Attendance in meetings by the president and secretary of the Anchalik committees is compulsory. The members can be divided in the four categories.

The composition of small and big farmers has enabled the cooperative to deal with large volumes in the market and become price setters. The society has captured more than 60% of Guwahati and other main fish markets and this share is growing every year. The second biggest stakeholders in the cooperative are traders, who receive a healthy margin (Rs 30/kg) through sale of live fish. They in return, share market information with the cooperative and the risks associated with information asymmetry in the market are minimised. The rapport developed between the traders and the society is so good that if a trader orders certain quantity of fish in the morning, he receives it on the same evening. This relationship has resulted in a flourishing business between the traders and the society.

### Livelihood impact from the association

The Dabaliapara intervention has impacted the fisheries sector in the region in two ways. Firstly, in the last ten years, it has increased the productivity of the ponds from 1.65 mt/ha to 2.25 mt/ha. It has brought more agricultural land under fisheries with the area under fish ponds increasing from 1250 ha to 2600 ha in the last ten years. The lease rates for fish ponds

### Table 1 : Categories of Farmers

<table>
<thead>
<tr>
<th>Category</th>
<th>Size of ponds (bighas)</th>
<th>% of members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Big</td>
<td>More than 40 bighas</td>
<td>5%</td>
</tr>
<tr>
<td>Big</td>
<td>20-40 bighas</td>
<td>50%</td>
</tr>
<tr>
<td>Medium</td>
<td>10-20 bighas</td>
<td>30%</td>
</tr>
<tr>
<td>Small</td>
<td>Less than 10 bighas</td>
<td>15%</td>
</tr>
</tbody>
</table>

### Table 2 : Surplus generated per hectare

<table>
<thead>
<tr>
<th>Cost Per Ha</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Ponds</td>
<td>17</td>
</tr>
<tr>
<td>Size of Ponds (Ha)</td>
<td>4.6</td>
</tr>
<tr>
<td>Sale of fish per hect (Rs/ha)</td>
<td>265421.2</td>
</tr>
<tr>
<td>Total cost (Rs/ha)</td>
<td>172463.2</td>
</tr>
<tr>
<td>Maintenance Cost</td>
<td>4882.8</td>
</tr>
<tr>
<td>Cost to maintain water level</td>
<td>3529.2</td>
</tr>
<tr>
<td>Seed Cost</td>
<td>24983.8</td>
</tr>
<tr>
<td>Labour Cost</td>
<td>22810.6</td>
</tr>
<tr>
<td>Cost of lease</td>
<td>20531.3</td>
</tr>
<tr>
<td>Watch and Ward Cost</td>
<td>19262.1</td>
</tr>
<tr>
<td>Manure Cost</td>
<td>69752.6</td>
</tr>
<tr>
<td>Miscellaneous Cost</td>
<td>6710.8</td>
</tr>
<tr>
<td>Surplus generated per hectare (Rs/ha)</td>
<td>92958.0</td>
</tr>
</tbody>
</table>

### Economics of Culture Fishery in Dabaliapara

**Fish seed trading**

Trading of fish seed is done for three months in a year from May to July. During this period, on an average 50 small trucks of fish seed are sent out to markets for sale daily by society members.

The trading of edible fish is done for seven months i.e. from June to December. During this period, on an average 40 small trucks (Tata Mobile etc.) of edible fish are sent out to market for sale by members of the society every day.
have jumped ten fold in the last eight years. The current lease rates are Rs 8000 per bhiga compared to Rs 500 per bhiga ten years ago. In 1997 only 10% of the Dabaliapara village population was engaged in the fish seed and edible fish business. Now nearly 90% of the village population is engaged in the fishery business as the main source of livelihood. The success story of fish culture in Dabaliapara has encouraged nearby villages to follow suit. During the summers when ponds dry, farmers grow vegetables or boro rice with the available moisture on a small part of the pond. Thus the investment in digging a fish pond is reimbursed within two years. Also, the mud dug out from the fish pond is sold for road making and building embankments.

Ten years ago with prevalent high illiteracy levels and consequent ineligibility for government jobs, the only livelihood source was emigration to nearby cities and towns as wage labourers. Now a reverse trend is being witnessed with immigration from nearby districts in search of daily work in the fish ponds.

With the intensification of fisheries in the area, the wage rates have risen. A daily wage earner in a fish pond receives Rs 100 to Rs 150 per day. Most labourers are hired on a monthly basis by fish farmers and receive an income of Rs 25,000 to Rs 30,000 during the entire fishing season (April - November end). Many labourers who have learned fishing skills by working in the fish ponds have formed their own SHG groups and now acquire ponds on lease to harvest their own fish. These SHG groups have also become members of the society and avail its services.

Every 194 man-days effort of a fish farmer generates a requirement of an additional 1133 hired mandays per year. Therefore, it has been observed that numerous educated unemployed youth from nearby villages have also entered the fishing business or become commission agents in the fish markets. These dealers are present in all the markets where the fish from the society is sold. Now the society supplies edible fish to Uzanbazaar, Bhetapara, Sijubari, Singimara, Goalpara, Doodhnai, Shillong, Kohima, etc. It also supplies fish seeds to Rangia, Barpeta Road, Dekiajuli, Lakhimpur, Rangiuli, Sontoli, Golaghat, Krishnai, Nalbari, Mongoldoi, Kharupetia, Fakiragram, Bijni, etc. They in turn help supply market information to the society. Thus the growth of the fisheries industry in the region has provided numerous employment avenues for the people thus uplifting the economy and society.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Amount / Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per day Sale</td>
<td>40 trucks</td>
</tr>
<tr>
<td>Capacity per Truck</td>
<td>400 kgs</td>
</tr>
<tr>
<td>Average Price per kg.</td>
<td>Rs.40</td>
</tr>
<tr>
<td>Period of trading</td>
<td>210 days (7 months)</td>
</tr>
<tr>
<td>Quantity sold in a day</td>
<td>16,000 kgs</td>
</tr>
<tr>
<td>Sales Value per day</td>
<td>Rs.640,000</td>
</tr>
<tr>
<td>Quantity sold during the whole period</td>
<td>3,360,000 kgs.</td>
</tr>
<tr>
<td>Sales Value for the whole period</td>
<td>Rs.134,400,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Amount / Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per day Sale</td>
<td>50 trucks</td>
</tr>
<tr>
<td>Capacity per Truck</td>
<td>200 kgs</td>
</tr>
<tr>
<td>Average Price per kg.</td>
<td>Rs.50</td>
</tr>
<tr>
<td>Period of trading</td>
<td>90 days (3 months)</td>
</tr>
<tr>
<td>Quantity sold in a day</td>
<td>10,000 kgs</td>
</tr>
<tr>
<td>Sales Value per day</td>
<td>Rs.500,000</td>
</tr>
<tr>
<td>Quantity sold during the whole period</td>
<td>900,000 kgs.</td>
</tr>
<tr>
<td>Sales Value for the whole period</td>
<td>Rs.45,000,000</td>
</tr>
</tbody>
</table>

Table 3: Total sales value of fish trading

Fish being transported in Society’s truck

A society meeting

Arindam Dasgupta, Dhriiti, arindam.dasgupta@dhriiti.org
Biodiversity simply defined as all forms of life and constitutes all the flora and fauna on the earth. Our forests and mountains, our rivers and seas, our gardens and parks, our homes and workplaces all express biodiversity. Biodiversity can be observed in the soaring eagle, the leaping salmon, the tiny ladybird, the creepy cockroach, the crawling lizard, the gay flowers, the lofty trees. Biodiversity is the natural capital which supports all our lives. It is vital for our survival and is a key measure of the health of our planet.

Globally, biodiversity is unevenly distributed: that is, some parts of the world are far more biologically diverse than others. The most important overall trend in terrestrial, freshwater and shallow water marine systems is species diversity increases from the polar regions to the equatorial belt. This is because warmer areas support greater numbers and varieties of life forms than colder areas. On land there is also a trend for areas with more rainfall to be more diverse than arid ones.

Is biodiversity important?
The natural environment is the source of all of life's resources. Environmental processes provide a wealth of services to the living world like air to breathe, water to drink and food to eat, as well as materials to use in our daily lives and natural beauty to enjoy. Complex ecosystems with greater biodiversity tend to be more stable.

Linking, poverty and biodiversity
Unfortunately, the wealthy possess a greater degree of

Globally, deforestation is responsible for considerable biodiversity loss and 18-20% of greenhouse gas emissions; locally it deprives forest dependent communities of natural resources they have used for generations.
access and control to a greater share of biodiversity services than the poor. They also consume them at a higher rate, and have the ability to purchase services that are scarce or replace them with substitutes.

On the other hand, low income households are highly dependent on the integrity of their local environment. A heterogeneous local environment provides the widest possible range of ecosystem services for the poor reducing their exposure to risks and thus dependence on the global markets or on development assistance. Different wild species, crop plants and livestock and the biodiversity in rural areas are directly available to them. Unfortunately they are often forced to bear the externalized costs of other people’s use of substitutes for ecosystem goods and services from their domain. For example, they may live in places that suffer from the effects of pollution, or are displaced by hydroelectric projects. When a degraded river basin, for example, no longer purifies water effectively, the wealthy can afford to build water treatment facilities but the poor cannot. Similarly, the depletion of fisheries does not disrupt supplies of fish for the wealthy. But to poor fishing communities, it means loss of their precious livelihoods.

However, biodiversity conservation activities can sometimes result in increased poverty (eg. through loss of access to resources) and on the other hand poverty reduction interventions / programmes can sometimes undermine biodiversity conservation through over- exploitation of scarce, but valuable, resources.

To understand more deeply the relation existing between livelihoods and biodiversity some caselets have been identified. These caselets broadly represent the relation between the two.

**Lake Kariba fisheries management**
Faced with a declining fish population, Zimbabwe established a pilot program with Zambia to control the fish population of Lake Kariba. The program is a community-based natural resource management system that follows an ecosystem approach to fisheries management. Small units of fisherfolk are granted leases for fishing, this is to exclude non-members from fishing. The fishers in each unit or “concession area,” are given the authority to allocate the fish catch to members of the lease, provided that each fisher records and reports their catch data. The fishers are then made aware of their environmental impact and recognize the value of the lease. Thereby they engage in a system of adaptive management whereby as the fish stock decreases, the fishers control their catch rates. Government fisheries management authorities still retain some responsibilities, including giving technical advice, determining optimal fishing levels and providing information regarding preferred fishing techniques. While this system is still in its incipient phase, it represents a new type of management that seeks to maintain traditional structures and empower communities.

**Community managed forest resources:**
Arabuko-Sokoke Forest (ASF) lies close to the Indian Ocean near Malindi, Kenya, surrounded by 53 villages and at least 110,000 people. Arabuko-Sokoke is remarkable for its biodiversity and is critical for many people's livelihoods. Although a forest reserve, it has suffered considerably such as poaching and illegal logging. Through projects funded by a number of donors and coordinated by BirdLife International and Nature Kenya (BirdLife in Kenya), considerable gains for conservation and the local economy have been made over the last twenty years. This has improved governance through pioneering Participatory Forest Management action, the formation of a **Arabuko Sokoke Forest Management Team** (comprised of various Government departments and Nature Kenya supporting local community representation), the establishment of an active **Arabuko Sokoke Forest Adjacent Dwellers Association** and the agreement (in 2002) of a 25-year Strategic Management Plan. Arabuko-Sokoke provides a good example of the diversity of opportunities that exist for linking sustainable resource management to people’s livelihoods, and how institutions in support of this can become catalysts in a range of social protection measures. Working with local people, a wide array
of successful income-generating activities has been established. A range of community-based organisations around the forest are actively networking and receiving training in business skills, production, quality control and marketing of forest-products. Forest-adjacent communities are empowered and actively engaged in forest management issues that affect them. In return, there is a greater appreciation of the value and importance of the forest which helps ensure Arabuko-Sokoke is conserved for future generations.

**Ecosystem improvement:**
Boeung Prek Lapouv in Cambodia is the best remaining example of the wet grassland ecosystem that once dominated the Mekong Delta region. To the local people of Borei Chulsar and Koh Andeth Districts in Takeo Province, the site is an important dry season refuge for fish, acts as a reservoir of genetic crop resources and serves as a natural barrier against floods. However, the area is under pressure from overexploitation of natural resources (fish, birds and plant products), jeopardizing local people's dietary and livelihood security. Fish stocks have fallen and degraded wetland areas have left local people vulnerable to seasonal flooding which regularly destroys their deep-water rice crops. BirdLife, a local organization, supported the creation and viability of this ecologically important part of Mekong Delta for people and biodiversity.

The development of an active and effective IBA Local Conservation Group to help address these issues, including through raising awareness with and gaining cooperation from government officials. This group is now consists of local community members, supported by Cambodia’s Ministry of Agriculture, Forestry and Fisheries (MAFF). MAFF staffs are seconded to the project, which also helps build conservation capacity in the government. The IBA-LCG has successfully tackled dwindling fish stocks and flooding problems. On realizing that fine fishnets were decreasing the sustainability of the fisheries, the local support group banned their use. Despite smaller fish escaping from larger mesh nets fishermen have seen average nightly catches increase from 2 kg to 5 kg. Degraded areas have also been regenerated vegetation has regrown. All of these factors help provide the local communities with greater amounts of food for consumption and sale, and to secure the long term future and viability of this ecologically important part of Mekong Delta for people and biodiversity.

**Traditional Medicine:**
Medicines based on natural products, for example, provide the primary healthcare needs for up to 80 per cent of people in developing countries. Similarly, wild resources and non-timber forest products provide more than 20 per cent of rural household incomes in Vietnam, up to 35 per cent in Zimbabwe, and more than 50 per cent in Senegal, according to the World Conservation Union (IUCN).

ZINATHA is an association of traditional medicine practitioners in Zimbabwe. The association has registered over 50,000 practitioners. ZINATHA acts as an entry point at the local level for individuals seeking access to medicinal Traditional Knowledge (TK). The existence of such an association helps increase awareness among the general population of the value of TK and the importance of preserving TK for society. While the association is still privately run and legislation pertaining to the access of genetic resources and TK is still in the formulative stage, there exists the danger of inequitable benefit sharing arising from the use of TK. For instance, ZINATHA provided plant samples of the plant Swartzia madagascariensis to the Pharmacy Department at the University of Zimbabwe for analysis, but the plant samples found their way to the University of Lausanne. These plant samples were patented by the University of Lausanne and Phythera, a US-based Pharmaceutical Corporation, is expected to earn significant revenues annually from sales of the products made from the plant extract.

**Conclusion:**
Conservation of biodiversity reduces poverty by increasing food security, improving health by improved utilization of medicinal plants, livelihoods generation, etc. A sustainable future depends on our efforts towards poverty reduction and conservation. In other words, we must focus on 'biodiversity for development' not 'biodiversity or development.' Since the living world relies on the natural environment, it is in our best interests and that of future generations to conserve biodiversity.

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The mission of ALC India is to fulfill the need for affordable, timely and quality professional consulting services to the individuals, business, government, non government and community based organisations in order to promote sustainable livelihoods for poor thereby creating equitable share and control over growing economy.

ALC India provides varied kinds of consultancy services to support the needs and efforts in the development of poor, especially for enhancing their livelihoods.

## ALC India Clientele

So far ALC India has provided consulting services to more than 30 organisations covering almost 18 states in India. The category wise major organisations services so far are as follows:

### Livelihoods Services

<table>
<thead>
<tr>
<th>Livelihoods</th>
<th>SERVICES</th>
</tr>
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<tbody>
<tr>
<td>Christian Children Fund, Bangalore</td>
<td>Timbaktu Collective, Anantpur</td>
</tr>
<tr>
<td>Sir Ratan Tata Trust, Mumbai</td>
<td>Rural Development Trust, Ananthpur</td>
</tr>
<tr>
<td>APMAS, Hyderabad</td>
<td>Urmul Sethu, Bikaner</td>
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### Development Services

<table>
<thead>
<tr>
<th>Development</th>
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<tbody>
<tr>
<td>World Vision India, Ballia</td>
<td>World Vision India (Lucknow, Kottayam, Hyderabad, Gowhati, Chennai)</td>
</tr>
<tr>
<td>Sir Ratan Tata Trust, Mumbai</td>
<td>Rural Development Trust, Ananthpur</td>
</tr>
<tr>
<td>APMAS, Hyderabad</td>
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### Management Services

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<tbody>
<tr>
<td>Centre for Micro Finance, Jaipur</td>
<td>Basix, Hyderabad</td>
</tr>
<tr>
<td>Centre for Micro Finance, Jaipur</td>
<td>WINGS, Hyderabad</td>
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<tr>
<td>Centre for Micro Finance, Jaipur</td>
<td>Chitrika, Hyderabad</td>
</tr>
<tr>
<td>Centre for Collective Development, Hyderabad</td>
<td>Federaction of Farmers Association, Hyderabad</td>
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<tr>
<td>Centre for Collective Development, Hyderabad</td>
<td>NR International, Delhi</td>
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<tr>
<td>Centre for Collective Development, Hyderabad</td>
<td>BLESS, Pondicherry</td>
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</table>

For further details contact

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Getting space is the biggest concern and constraint for urban poor. Space in a formal establishment/building is of course very difficult to get; that too with very high rent and deposit money. Most of the urban poor having lack of sufficient hard-cash and are unable to afford even a tiny space for doing business for their livelihoods. So they resort to the space available on the street (between formal establishments and roads) or in any vacant space. This act is often considered as ‘encroachment’ and there is no shortage of people who think and complain about these ‘invaders’.

They think these poor fellows are ‘street-smart’ as they are able to get a piece of land for ‘free’. But people rarely know about the ‘hidden-cost’ of that ‘free-space’ which is sum-total of hafas to the local goons, traffic personnel and the municipal officials.

The street vendors are susceptible to harassment from all these people along with indirect harassment from the aam-janta, the buyers. The buyers’ bargain up to the maximum extent that leaves the vendors with minimum profit. In some cities these vendors are given licence by the urban authorities but in different cities using public space is treated as legal offence. To state an example the Kolkata Municipal Corporation Act states in 2(ii) that in order to prevent encroachment in public places, “it has been decided to declare any such encroachment by the hawkers, stall holders and other organisations as cognisable and non-bailable offence.” It is not only harsh but also a height of hypocrisy as the same ‘we’, who raise finger at them are their regular customers.

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