

4.

Shocks, Vulnerability, Risks and Coping Strategies

The various frameworks on Livelihood Approaches emphasized that livelihoods of the poor are vulnerable because of the different kinds of shocks and resultant risks they are exposed to. Therefore, the promotion of livelihoods involves a deep understanding of these risks as well as the means of mitigating or minimizing these (both as a curative as well as a preventive mechanism).

Risks are the consequences or effects of adverse events called shocks and are mediated by the vulnerability of a HH. Thus in order to understand the risks to people's livelihoods and how they cope with them, it is necessary to understand about shocks and vulnerability, first.

4.1 Shocks and Vulnerability

Shocks are events that adversely affect a HH's prospects. These may be extremely devastating natural events such as earthquakes, cyclones and epidemics, or could be more local and partly man-made, such as floods, fire, riots or adverse government policy (such as land-acquisition). Some shocks last briefly, such as a raging fire, while others which go on for months, such as a drought. There may be others more permanent such as climate change leading to lower rainfall, effects of massive volcanic eruptions and so on.

Vulnerability is specific to a HH. It refers to the predisposition of a HH to withstand shocks. For example, a HH, whose members already suffer from malnutrition due to food insecurity, are more vulnerable to infections and are likely to be among the first to fall ill, in case of an epidemic. They are also prone to be more affected and likely to die by the same infection, as compared to a healthy person. Similarly, the houses of the poor are more vulnerable to being destroyed or damaged by cyclones, floods and earthquakes, as compared to the houses of those who are better-off, which are built on higher ground using reinforced cement concrete.

Vulnerability can be defined as the “diminished capacity of an individual or group to anticipate, cope with, resist, and recover from the impact of natural and/or man-made disaster”.⁵⁶ Vulnerability is of two types: biophysical and socioeconomic. The risk factors inherent in nature that threaten a community constitute its biophysical vulnerability. Its socio-economic vulnerability arises from internal and external characteristics that constrain its responses and ability to adapt – poverty, inequality, marginalization, food security, housing quality, access to insurance, alternative livelihoods, health and education, etc. Vulnerability of a group or community is different and is based on what they do and where they live. A measurable definition of vulnerability is given by the World Bank as follows:

“Vulnerability is defined here as the probability or risk today of being in poverty or to fall into deeper poverty in the future. It is a key dimension of welfare since a risk of large changes in income may constrain HHs to lower investments in productive assets—when HHs need to hold some reserves in liquid assets - and in human capital. High risk can also force HHs to diversify their income sources, perhaps at the cost of lower returns. Vulnerability may influence HH behavior and coping strategies and is thus, an important consideration for poverty reduction policies”.⁵⁷

According to a recent World Bank report⁵⁸ - Shocks and Vulnerability Overview, spikes in food prices, an increasingly unstable global climate and the prolonged economic slowdown have hurt poor people the most.

Food prices: Between 2010 and 2011, higher food prices pushed 44 million people into poverty. Poor people spend a high percentage of their income on food, which makes them vulnerable to fluctuations in global food prices.

Climate change: Reports issued by the World Bank in 2012 and 2013 warn that rising global temperatures will roll back decades of development and threaten the livelihood of millions who live in flood-prone or drought-stricken regions. Disruptive weather and other climate change-related disasters will hit the poor the hardest as they are least able to adapt to a changing world.

⁵⁶ <http://www.ifrc.org/en/what-we-do/disaster-management/about-disasters/what-is-a-disaster/what-is-vulnerability/>

⁵⁷ “*Measuring Vulnerability*”. The World Bank. Accessible at: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTPOVERTY/EXTPA/o,contentMDK:20238993~menuPK:492141~pagePK:148956~piPK:216618~theSitePK:430367,00.html>

⁵⁸ <http://www.worldbank.org/en/topic/shocksvulnerabilities/overview>

Macroeconomic shocks: In developing countries, the 2008 financial crisis pushed an estimated 53 million more into poverty. The prolonged global economic slowdown was estimated to result in 50,000 additional infant mortality deaths in Sub-Saharan Africa. Every time a macroeconomic shock hits, poor people bear the brunt of the impact.

4.2 Risks

Risk is the *effect* on a HH as a result of a shock (an adverse event) and mediated through its vulnerability (the more vulnerable a HH, the more the risk of the same shock). Though the effects may be physical, such as damage to the house, or members falling ill and so on, in order to translate all the risks into a comparable scale, it is usual to translate the effects into financial terms.

A study⁵⁹ for the World Bank in 1996, estimated the percentage of rural HHs, which suffered a shock due to various types of adverse events in the previous ten years and the annual average amount of loss per event (risk).

Table 21: Shocks Related to Adverse Events: Percentage of Rural Households and the Rupee Value of Loss

Cause	Percentage of all respondents reporting this shock	Average amount of loss for those reporting loss (Rs)
Flood, Heavy Rain	44	7,861
Drought	39	16,994
Pest Attack	27	17,303
Sharp Price Fall	10	26,425
Fire	4	6,250
Death of Family Member	3	13,447
Death of Livestock	2	10,333
Theft	2	20,698
Accident	1	34,921
Others	1	15,020
Average		39,500

Each row is out of 100%

⁵⁹ Mahajan, Vijay and Bharti Gupta Ramola (1996). *Access and Sustainability: Financial Services for the Rural Poor and Women in India*. *Journal of International Development*, Vol. 8, Issue 2, pages 211–224, March 1996

As can be seen, the loss per HH is about Rs 39,500 per annum for those reporting losses. This should be compared with the average annual income of Rs 45,484 for the same respondents. The loss was 86.8 percent of the annual income, enough to cause a setback for several years. The normal way to overcome this shock is by borrowing and the interest burden then continues for several years. Another study showed that ill-health and health expenditures were the reason for more than half of the HHs falling into poverty.⁶⁰

Risks can be classified into two categories: *idiosyncratic*, those peculiar to a HH, such as illness of a family member; and *systemic*, those which affect a large number of HHs at the same time or the same place – like epidemics, droughts and earthquakes.

4.2.1 Idiosyncratic Risks Faced by the Poor

There are certain risks which affect a single HH or a just a few at a time. Some examples of these are the effects of these shocks:

- Disease or accidental injury affecting a family member
- Disease affecting livestock
- Pest attack on crops
- Fire or theft in house or/shop
- Location linked damage to house due to flood, projects etc.

The problem with idiosyncratic risks is that they usually do not evoke a public response, such as relief efforts by NGOs or by the government. Thus, the affected HH copes with the risk by itself and has to rely on its meager resources to do so. If insured, they can raise an insurance claim, or else, they have to dip into savings, if any. If there is no insurance and no savings, as is likely, then the poor resort to selling some asset like a goat or a bicycle. They may rely on the social safety net they may have built over the years. Since reciprocity is expected in social exchange, accessing the social safety net built over years, requires their having helped others in similar circumstances in the past or they must be considered dependable. That is one reason why one finds apparently ‘irrational’ expenditure even by very poor HHs on events such as marriage and death feasts. It is simply a rational investment in a safety net. The last resort of the affected HH is to leave the effects of the shock untreated and bear the consequences.

⁶⁰ Krishna A. *Escaping poverty and becoming poor: Who gains, who loses, and why?* World Development, 2004;32(1):121–136.

4.2.2 Systemic Risks Faced by the Poor

Systemic risks can be categorized along three main dimensions:

- **Breakdown of governance** in several political jurisdictions, characterized by violent conflicts, terrorism, absence of rule of law, deprivation of rights, gender related discrimination, loss of jobs, etc.
- **Unfavorable impact of globalization** such as downturn in prices of commodities exported by developing countries, increase in price of imported commodities, increasing incidence of cross border diseases such as HIV and AIDS, SARS and bird flu. The opening of markets in a developing country because of compulsory lowering of tariffs under the WTO agreements, while developed markets remain closed due to non-tariff barriers such as food standards.
- **Harmful effects of climate change**, such as frequent droughts, floods, disease, increasing soil erosion, destruction of physical infrastructure (such as roads, bridges etc.), adverse seasonal price fluctuations, fluctuations in food availability due to seasonal climatic changes, and so on.

4.2.3 Livelihoods Affected by Breakdown of Governance

Livelihood is the means of making a living and involves transformation of some resources into goods and services, useful either to the creator of those goods and services, or to others who are willing to pay for them. So long as people produced and consumed enough for their own use, the process was self-managed, meaning the amount of resources utilized was in line with their consumption requirements. However, as people started producing more than what they could consume, they had to ponder over the right way to allocate resources: *who* could use *what* quantity of resources.

It was then that many norms of resource allocation started emerging which had to be in concurrence with the views of all those involved. Resource allocation within the family was managed by the *head of the family*. Resources *within the village* were allocated by the village *headman*. They were expected to bear in mind the benefit of the entire family or the village, while allocating resources. These mutually agreed norms were thus institutionalized. The concept of a nation-state soon emerged, which started playing this role at the level of the nation.

The state started providing a variety of public services including national security, law and order, while also 'ensuring that all the citizens have enough rice, milk and clothes' or livelihoods. As a part of this function, the state developed rules and norms for resource allocation in various forms. Laws related to ownership and inheritance of private property, utilization of forest resources, mineral resources are some examples of the norms set by the state.

An American journalist Robert Kaplan, investigating the growing population pressure affecting people's lives in Africa, noticed that when resources were scarce, societies developed various institutional norms for rights and entitlements to resources. However, when the resource availability shrunk beyond a certain level, people started breaking these norms. Powerful people used their power to control resources. On examining some African countries that were becoming more porous, Kaplan reported that the nation-states were breaking down under the conditions of extreme shortage of livelihood resources.⁶¹

This phenomenon can be seen spreading to other developing nations as well. When resources become extremely scarce, people break regional and national boundaries. Battles over many natural resources like water are becoming more frequent. Some scholars have argued that the present development model, which promotes the culture of rampant production, will lead to further anarchy, with livelihoods of the weaker being further endangered. Evidence of this can be seen in the densely populated areas of India, where resource availability per capita is going below the critical, minimum level.

Some recent examples of such breakdowns can be seen in different parts of India. West Bengal used to be a food surplus region in 1960s, but over time, has now become a net importer of food. Most areas of West Bengal have very high productivity as well, but the population density is high and agriculture has saturated in terms of labor. The only source of additional employment would come from the growth of industry, which requires land. That poses a problem for the state. Can some agricultural land be mutated for industrial use? When the state government could not reach a mutually acceptable solution, people from Nandigram and Singur and other such areas where agricultural land was acquired for industrial purpose, began to agitate. Across India, one can witness many such conflicts between agriculture and industry for the same resources.

⁶¹ Robert D Kaplan (1994): *The Coming Anarchy: How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet*'.

The conflict between the sugarcane farmers of eastern Maharashtra and sugar mills, which in fact make their produce marketable, over sharing of water, is another example of conflict over limited resources between the livelihoods of two different groups of people, leading to break-down of governance. Similarly, even ecological sustainability reduces accessible resources to extremely low levels, leading to gross violation of mutually accepted norms. Sometimes, even the Government violates such norms. This results in disasters like the one faced by Kedar Valley in Uttaranchal, due to the State Government's violation of environmental safety norms prescribed by the Central Government. In many cases, the State is compelled to take decisions which are sub-optimal for all parties. This also leads to loss of trust in the institutions of the State amongst people. A classic example of this is the conflict between the farmers of Karnataka and Tamil Nadu, over distribution of the waters of River Cauvery. Both parties claim that the Water Commission has been biased against them, not giving them adequate water.

There are situations when people in many African countries like Nigeria, Sudan began ignoring national boundaries in search of livelihood resources. This led to the formation of new fiefdoms built using force, cutting across formally accepted borders to control resources. Similarly, even in the central parts of India, where livelihood resource accessibility have reached levels at which livelihoods cannot be sustained, there is clear evidence of the breaking down of the state's authority. The Naxalites provide alternate, state-like functions. The spurt in violent activity in India can be attributed to three chief causes: the inability of a democratic polity to put an end to the exploitative structures in society, official inefficiency in expediting processes intended to help the downtrodden, and the unification of revolutionary forces by sinking their ideological differences.⁶²

In response, the Government of India launched an integrated plan of action against Left Wing Extremism (LWE) under the guidance of the former Home Minister, P. Chidambaram.⁶³

The Government's approach is to deal with LWE in a holistic manner, in areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management.

⁶² The Maoist Challenge, K Srinivasa Reddy, http://www.india-seminar.com/2007/569/569_k_srinivas_reddy.htm

⁶³ The Government of India's Approach to Left Wing Extremism. http://mha.nic.in/naxal_new

In dealing with this old problem and after numerous high-level deliberations and interactions with the state governments concerned, it was believed that an integrated approach aimed at the direly affected areas would deliver results.

With this in view, a detailed analysis of the spread and trends in respect of Left Wing Extremist violence was made and 106 most affected districts in nine states were considered for special attention with regard to planning, implementation and monitoring of various interventions. These include provision of Central Armed Police Forces (CAPFs) and Commando Battalions for Resolute Action (CoBRA); modernization and upgradation of the State Police and their Intelligence apparatus, etc.

In 2010, the Government reported a bold confrontation of the Maoist challenge with a consequent rise in the number of deaths in 2009 amongst civilians (591), security forces (317) and militants (217). It was expressed that the State Governments concerned would gradually gain the upper hand and reestablish the authority of the civil administration.⁶⁴

In contrast, the voice of the *Adivasis*, the indigenous communities living in the area is captured in the quote below:-

“The success of the revolutionary activist lies in forcing the ‘enemy’ (the state) to resort to excesses, which in turn would further alienate the masses from the perpetrator of the excesses. The more people get distanced from the institutions of governance, the more relevance they are likely to find in an alternative red politics. On a strategic plane, the game is extremely simple. The relevance of revolutionary politics is inversely proportional to the perceived efficacy of the state, which tries to act in accordance with the principles of a democratic polity.

Talking to *adivasi* peasants in the guerrilla zone as well as in areas adjoining it, we came across three perspectives on why the conflict had escalated in Bastar. **First**, that the war launched by the Government was being waged on behalf of big corporations to grab *adivasi* land. They, the peasants, were being warned that if they did not consent and take the compensation being offered, they would not only lose their land but also might never receive any compensation. **Second**, a common query was how could the land that had not only sustained them all this while, but also was the next generation’s only guarantee of securing a livelihood, be compensated for in monetary terms? Besides, it was

⁶⁴ Assessment-of-Left-Wing-Extremism-2010 <http://www.vifindia.org>

pointed out, that it was not just bare land, trees such as *sulfis*, mangoes and tamarinds that gave them food and drink while also fetching them an income. **Third**, the development that the Government talked of was bunkum (*bakwas*) having seen what was done in Bailadila. All these years, the tribal people had fended for themselves, receiving paltry help from the Government, and now, when their land was wanted by corporations, the Government talked of ‘development’. They wanted the Government to just let them be.⁶⁵

By 2011, a stalemate in the process was acknowledged by the Government and the Government of India had, by June 2013, toned down the militaristic policy and taken up a developmental approach. The Ministry of Rural Development launched the Roshni program to impart skills and provide employment to 50,000 youth in 24 most critical LWE affected districts, with training being imparted through public- private and public-public partnerships.

Another program, of recruiting and posting well-educated young professionals as ‘Prime Minister’s Rural Development Fellows’ was launched with a focus on the LWE affected districts. Only time will tell which of these methods will work.

4.2.4 Impact of Globalization on Livelihoods

Globalization is the increased worldwide competition between firms that have plants and offices across the globe and are hardly susceptible to influences of national governments any more. Globalization brings consumer goods from all over the world in the local supermarket. Schuurman⁶⁶ presents two views on globalization.

The first point of view sees globalization as causing increased homogenization and interdependency all over the world in the cultural, social and economic dimensions. Thus, industries in poor countries, which desire to grow through international trade, are, by and large, constrained to operate within this framework of global products and globalized supply chains.

⁶⁵ Gautam Navlakha - <http://www.epw.in/insight/days-and-nights-maoist-heartland.html>

⁶⁶ Schuurman, Frans J (2002). *Globalization and Development Studies: Challenges for the 21st Century*. Sage Publications, New Delhi.

The second view, sees a close association between the global and the local, and is therefore sometimes called ‘glocalization’ (Robertson 1995).⁶⁷ This view also identifies the trend towards global markets and politics, but notes an increased diversity and an increased importance of regionalism and community as well. Cultural fragmentation, for example, with its reinvention of local traditions and identities, is seen as an answer to the loss of identity through homogenization.

With respect to livelihood strategies, globalization may have two important consequences: (1) because markets and social relations are becoming worldwide, livelihoods will become multi-local (2) because of glocalization, the importance of the international and the regional-local levels of scale will increase to the detriment of those at the national level.

The accelerated tendency toward urbanization⁶⁸ that has accompanied changes in the structure of the global economy has forced the poor to adapt their survival strategies. This has led to increased oscillation between urban and rural livelihood contexts. Research has confirmed the impression that there is a rising tendency for HHs to become multi-spatial,⁶⁹ with some members residing in rural areas while others move toward peri-urban and urban settings, and at times even migrating abroad.

The term HH can thus no longer be seen as referring simply to a residential unit. HHs are progressively beginning to resemble highly gendered, tightly organized networks for the exchange of goods, services and support between rural and urban locations, and sometimes, across countries, when one member is abroad. The changing relationship between livelihood contexts also has consequences for the development of ‘local’ decision-making processes. At the institutional level, it demands a rethinking of such concepts as participation, decentralization or power devolution. At the HH level, it can imply fundamental changes in the ways decisions are reached regarding both urban and rural livelihood activities and the strategies followed for linking them.

⁶⁷ Robertson, Roland. (1995) “*Glocalization: Time-space and Homogeneity- heterogeneity*”, M. Featherstone et al (ed) *Global Modernities*, London: Sage. pp. 25-44

⁶⁸ Norman Backhaus, Christan Berndt, Benedikt Korf, Ulrike Müller-Böker, 2012. *Worlds of difference, different worlds: geographies of globalization*. National Center of Competence in Research, North South, University of Bern, Research Partnerships for Sustainable Development

⁶⁹ Rural Diversification: What Hope for the Poor, D Start, 2001. Accessible at www.odi.org.uk/resources/docs/5900.pdf

Globalization looks like a new round with new opportunities for livelihoods, but it is doubtful whether social exclusion will become a thing of the past. As Reardon⁷⁰ has observed, rural livelihood diversification away from agriculture has often involved poor people crowding into a competitive sub-sector supplying a limited market. The consequence is that returns to labor in these sub-sectors, which are already low, falls further.

For agriculture, horticulture and floriculture, the activities in which smallholders engage, the end markets are dominated by large retailing firms, which compete among themselves on continuing minor innovations in products and packaging, on maintaining strict quality criteria and on price.⁷¹ These retailer dominated supply chains require producers to be able to:

- meet exacting quality criteria, covering such matters as size, color, texture, pesticide residues and taste;
- adjust production volumes rapidly to meet short-term market trends;
- track minor product innovations by changing planting material, planting methods and packaging;
- keep up with cost-reducing technical progress, in a context in which the partner retailer and its competitors have multiple sourcing.

These requirements are enormously demanding in terms of information flows, capital requirements and governance and management of the system. Dispersed smallholder suppliers are at an increasing disadvantage, as they have much greater difficulties in accessing and then acting on rapidly evolving price and technical information.

Smallholders are simultaneously ‘locked in and locked out of the market’.

They are ‘locked in’ because:

- a. Smallholder agriculture as a form of economic organization is intrinsically a non-hierarchical form, in the sense that farmers are not workers on large farms taking orders from superiors. (This is not to deny that smallholders are often politically marginal with a subordinate role in the political economy, which is a central point of the ‘theory of peasantry’, but simply to point out that they are not farm laborers, and that they have to manage small businesses and transact in a variety of markets).

⁷⁰ Barrett, Christopher B. & Reardon, Thomas, 2000. “Asset, Activity, And Income Diversification Among African Agriculturalists: Some Practical Issues”, Working Papers 14734, Cornell University, Department of Applied Economics and Management.

⁷¹ J. Kydd, Agren. (2002): *Agriculture and rural livelihoods: Is globalization opening or blocking paths out of rural poverty?* ODI Network Paper.

- b. Thus individual poor farms, with little or no collateral, have to depend on market relationships to supply inputs and finance as well as to sell output. Often, this means that transactions costs are in excess of the potential benefits of the transaction, and therefore, there is market failure.

They are 'locked out' because:

- c. The existing model that pushes them into contracts with independent competitive suppliers in the market is unhelpful in dealing with market failure unless they have a certain form of hierarchical organization.

Therefore, solutions have to be found in long-term funded Institutional Development of smallholder farmers, which can bring in better bargaining power through aggregation as well as have a legal and transactional authority in dealing with the market, while building in resilience to deal with market failure. In this context, the efforts by the Small Farmers' Agribusiness Consortium (SFAC), Government of India, under which over 600 producer companies have been incubated and have started aggregating farmers for the market, is commendable.

While sharecropping, contract farming and state marketing organizations have been traditional models, producer organizations (co-operatives, companies) are the latest models being tried out both by civil society as well as the State.

In India, agriculture is still the dominant source of livelihood and many analysts⁷² blame globalization as a cause for its decline. Agricultural produce is of two kinds – foodgrains and non-foodgrains. Foodgrains contribute 75 percent of the total agricultural production. According to the agricultural growth analysis, annual growth rate has declined from 3.9 percent to 2.6 percent in the pre and post-reform periods respectively.

[One adverse impact of this has been a decline in the per capita availability of (nationally produced) foodgrains.] The average foodgrains available for each Indian in 1951 was 470 grams per day or 167 kilos per year, whereas in 1991, it was 175 kilos. In the post reform period, this gradually reduced to 154 kilos per year or 445 grams per day. In 1951, the [nationally produced] pulses available per head was 61 grams per day, whereas in 1991, rose to 75 grams, but the same declined to 32 grams per day in 2005. The demand was made up through massive imports.

⁷² Somasekhar, K. (2013) *Impact of Globalization on Indian Agriculture & Challenges – A Critical Review*. International Journal of Arts Commerce and Literature Vol 1 Issue 2 February 2013

Table 22: Growth in Agriculture Sector during Pre and Post Globalization

Crop	Growth rate in agriculture (%)	
	Pre-reform Period 1980-9000	Post reform Period 1996-2006
Agriculture and allied activities		
a. Agriculture	3.6	2.6
b. Forestry	4.2	2.5
c. Fishing	-0.1	0.5
Crop		
a. Food grains	2.9	1.5
b. Cereals	3.1	1.8
c. Rice	3.7	2.0
d. Wheat	3.6	3.6
e. Coarse cereals	0.0	-1.1
f. Pulses	1.4	0.5
g. Non-food grains	4.3	2.0

Source: *Economy survey 2005-06, Govt. of India*

Other researchers, however,⁷³ seem to have identified several positive benefits as well of globalization on Indian agriculture, as can be seen from the list.⁷⁴

No wonder then that, reputed agricultural economists Hanumantha Rao and Gulati⁷⁵ strongly advocate integration of Indian agriculture with the world market, on the plea that such a process would improve terms of trade of agriculture, the benefits of which would also percolate to the poor.

They also suggest a strategy for agricultural development, including broad policy changes in supply side factors and a shift from foodgrain production to new activities with favorable domestic and export demand, such as dairying and other animal products, horticulture and floriculture in order to boost agro-processing.

⁷³ Reddy, B. Sudhakar (2014). *Impact of Globalization on Agriculture: Some Grassroots Level Reflections in Andhra Pradesh*. International Journal of Scientific Research, Volume : 3 | Issue : 1 | January 2014

⁷⁴ Sample study with 90 farmers from Maddur Mandal of Mahabubnagar district of Andhra Pradesh

⁷⁵ Rao, C H Hanumantha and Ashok Gulati (1994). Globalization of Indian Agriculture ('Indian Agriculture: Emerging Perspectives and Policy Issues', *Economic and Political Weekly*, December 31,1994)

Table 23: Impact of Globalization on Agriculture (number of farmers)

Sl. no	Impact variable	Low	Moderate	High	Total
1	Frequent changes in cropping pattern	10	20	60	90
2	Technology component	7	27	56	90
3	Shift in agriculture from food crops to non food crops	8	17	65	90
4	Production for international markets	22	61	7	90
5	Increasing scale of interrelationship between agriculture and industry	7	19	64	90
6	Growing logistic support to agriculture	9	20	61	90
7	Formation of supply chains in agriculture	19	63	8	90
8	Differentiated production	6	62	22	90
9	Fortified food	57	23	10	90
10	Information intensive production	7	15	68	90
11	Emergence of ecological agriculture	60	20	10	90
12	Increasing risk taking behavior	10	21	59	90
13	Supply response on the basis of expected price	16	19	55	90

Their view is based on the premise that the growth rate in domestic demand for foodgrains has been declining and may not exceed the long-term foodgrain output growth rate of 2.6 percent per annum basically due to the availability of a wide range of non-foodgrains and urban consumption goods in rural areas. Therefore, agricultural growth need not any longer be limited by the goal of self-sufficiency but may benefit from trade so as to raise the overall rate of growth. The authors are cognizant of the fact that food self-sufficiency will continue to remain one of the goals of agricultural policy in the face of rising population and increasing demand of the poor.

4.2.5 Climate Change and Livelihoods

As per the United Nations Framework Convention on Climate Change Article 1, climate change is, 'A change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'.

Climate change and climate variability are the biggest threat we face today. They are the cause for environmental degradation and extreme and largely unpredictable weather events like floods, tsunamis, droughts and cyclones. They hit the poorest and most vulnerable communities the hardest, i.e., those who are largely dependent on climate-sensitive occupations and are on the natural resource base in the locality. The poorest populations are rendered the most vulnerable: they have maximum risk and exposure and minimum resilience and adaptability. The poor, natural resource-dependent, rural households bear a disproportionate burden of adverse impacts (Mendelsohn et al. 2007; Kates 2000)^{76, 77}

About, 700 million of India's population are directly dependent on climate-sensitive sectors – agriculture, fishing, livestock management, forests and the natural resource base of water, biodiversity, mangroves, coastal zones, and grasslands for subsistence and livelihoods. This resource base is under threat, and in turn, so are the people whose livelihoods depend on it. Among these people are some of the most vulnerable: the landless poor, forest dwellers and the erstwhile 'primitive' tribal groups now called PVTGs. By 2045, when India is expected to be the most populous nation on earth, this vulnerable population will be proportionately larger, while the resource base will be further depleted.

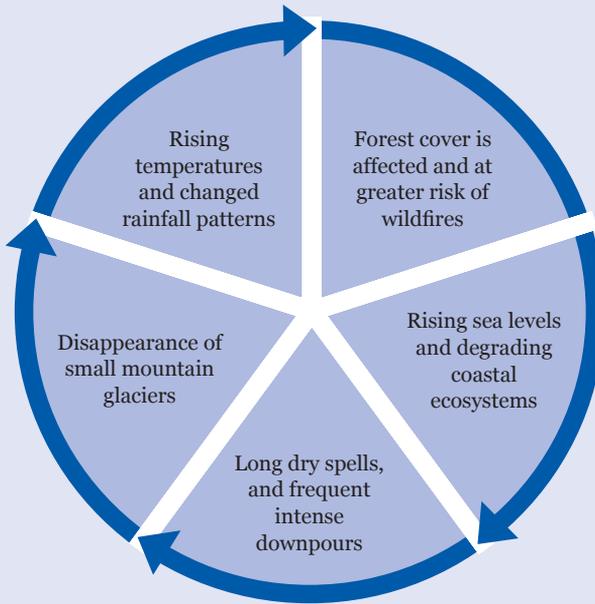
Over the last century, the country as a whole is hotter – mean temperatures have gone up by 0.56°C, with some local variations. Rainfall patterns during July–September have changed, with increasing trends in some regions (Gangetic West Bengal, western Uttar Pradesh, Madhya Pradesh, Jammu and Kashmir, Konkan and Goa, Maharashtra, Rayalaseema, and Coastal Andhra Pradesh) and decreasing in others (Jharkhand, Chhattisgarh, and Kerala). Sea levels were changing, having risen by 0.4–2 mm a year along the Gulf of Kutch and the Bay of Bengal though it had fallen along the coast of Karnataka.

Climate Change Vulnerability Index (CCVI), released by global risks advisory firm Maplecroft, United Kingdom, had ranked India the second most vulnerable country to climate change after Bangladesh. According to the report, almost the whole of India had a high or extreme degree of sensitivity to climate change, due to acute population pressure and a consequent strain on natural resources. This is compounded by a high degree of poverty, poor general health and the agricultural dependency of much of the populace.

⁷⁶ Mendelsohn Robert et al 2007, "Climate and Rural Income", *Climatic change* 81 (1): 101-18

⁷⁷ Kates, R. 2000. "Cautionary Tales: Adaptation and the Global Poor". *Climatic Change* 45: 5 – 17.

Figure 14: Effects of Climate Change



Impacts of Climate Change on Livelihoods

- Agricultural crops are adversely affected, with declining yields, and shifts in cropping pattern. Food and seed storage are adversely affected.
- Forests exhibit shifts in vegetation affecting forest based livelihoods.
- Fisheries based livelihoods affected by reduction in breeding grounds, regional extinction and migration, altered distribution of fish.
- Livestock affected by reduced grazing lands, less productivity and increased susceptibility to disease.
- Because of the greater run-off, water resources are affected by the reduction in recharge of ground water, decrease in availability of fresh water, thus, increasing the stress on water.

These impacts on the natural resources and livelihoods, directly and indirectly create adverse effects like increased health burden, increased morbidity and mortality, increased epidemics and increase in malnutrition. Women's burden increases as they have to fetch water from longer distances, thus affecting their health, education and number of hours available for engaging in productive activities.

Development interventions that focus on managing natural resources and enhancing or sustaining livelihoods are susceptible to the vagaries of climate change. These sudden events are less predictable and hence, cannot be controlled. Unless they are understood and planned for, they can cause unintended impacts that sometimes can be quite harmful. For example, a project focusing on marketing farm produce can be completely derailed by the occurrence of a climate event or risk such as sudden frost, prolonged dry spells, excessive or untimely rain, or temperature and humidity fluctuations, prompting the farmer to give up on that crop or even stop participating in the project. *If development interventions do not consciously pay attention to vulnerability, adaptive capacity and resilience of the target group, the very purpose of livelihood promotion may be endangered.*

The vulnerability of a community or a system is to be gauged by taking into account the *external biophysical and socioeconomic conditions*, which determines its context, and the *internal characteristics* that determine its coping and adaptive abilities in response to stresses and risks caused by climate change.

Box 3: Climate Change and Vulnerability

In a climate change context, vulnerability is a function of exposure, sensitivity, and adaptive capacity, where:

Adaptive capacity is the ability of the system to adjust to actual or expected climate stress or cope with the consequences, the degree to which adjustments in practices, processes, or structures can moderate or offset the potential for damage or take advantage of opportunities created by a given change in climate. It is considered as a function of wealth, education, information, skills and infrastructure, access to resources and stability and management capabilities.

Sensitivity refers to the degree to which a system will respond to a change in the climate, either positively or negatively.

Exposure is the degree of climate stress, long-term changes, exposure to the potential climate risk (for example, economic globalization increasing the risk of climate change).

Source: Intergovernmental Panel on Climate Change

Box 4: WOTR Approach to Climate Change

A practical approach to integrated planning for climate change

In its studies, the Watershed Organization Trust (WOTR)⁷⁸ found that risks and uncertainties to project implementation had increased over time with the rapidly changing context, increasing variability in climate and occurrence of extreme climate events new to that region. This observation led to the development of the idea about the need to build appropriate measures in the project that would indicate, at suitable intervals, its vulnerability to climate change. This would help plan projects more efficiently, make mid-course project adjustments as appropriate and identify timely interventions that would help reduce the vulnerability of the ecosystem and the communities inhabiting it.

If ignored, the vulnerabilities associated with climate change can result in either failure due to wasted investments or unintended consequences that adversely impact the ecosystem and communities. This is because the adaptive response of communities change with changing risks and environmental conditions (the availability of the five livelihood capitals – human, natural, social, physical, financial). In case the livelihood capitals are already low, the chances are that the communities' coping responses to climate risks would result in greater vulnerability.

The handbook entitled 'Community Driven Vulnerability Evaluation' brought out by WOTR is meant for development practitioners, to enable them to undertake a thorough assessment of vulnerability, including climate change, in a development context. It includes a tool called CoDrIVE-PD. The tool provides clear instructions and steps for collection, compilation, analysis and documentation of data or information that helps to precisely identify the complexities of vulnerability, using a Vulnerability Code.

It is a recombinant tool developed by converging key aspects of three known international research methodologies namely: Participatory Tool on Climate and Disaster Risks, DFID's Sustainable Livelihoods Framework and the Driver-Pressure-State-Impact-Response (DPSIR). As synthesized, this tool not only helps accurately assess the who, what and why of the climate risk (vulnerability), but it also simultaneously helps design a response that can be incorporated either pro-actively during the design stage or employed as a mid-course intervention. However, efforts to reduce vulnerability and improve the adaptive capacities of the poor call for strategizing and paying closer attention to institutions at different levels to ensure they work to benefit the poor.

The CoDrIVE-PD tool may be accessed in the Tools Chapter.

⁷⁸ Watershed Organization Trust, an NGO working on watershed development in fragile rain-fed areas in India

4.3 Coping Strategies of the Poor

Scoones⁷⁹ describes the coping strategies that the poor use in the face of shocks:

Drawing on reviews of the wider literature, the following distinctions can be seen:

- **Agricultural intensification and extensification** – between capital-led (often supported by external inputs and policy-led) and labor-led (based on own labor and social resources and a more autonomous process)
- **Livelihood diversification** – between an active choice to invest in diversification for accumulation and reinvestment, and diversification aimed at coping with temporary adversity or more permanent adaptation of livelihood activities, when other options fail to provide a livelihood. Diversification may, therefore, involve developing a wide income earning portfolio to cover all types of shocks or stress jointly, or the strategy may involve focusing on developing responses to handle a particular type of common shock or stress through well-developed coping mechanisms.
- **Migration** – between different migration causes (e.g., voluntary and involuntary movement), effects (e.g., reinvestment in agriculture, enterprise or consumption at the home or migration site) and movement patterns (e.g., to or from different places).

We have seen that the poor are vulnerable to many shocks, and thus, risk their lives and livelihoods proportionately more. But fortunately, poor HHs have a range of responses and coping mechanisms. This is shown in **Figure 15**.⁸⁰

⁷⁹ Scoones, Ian (1998) Sustainable Rural livelihoods – A Framework for Analysis. Working Paper 72. IDS Sussex

⁸⁰ Aga Khan Rural Support Program, India. A Presentation (2002).

Figure 15: Responses and Coping Mechanisms of the Poor to Shocks

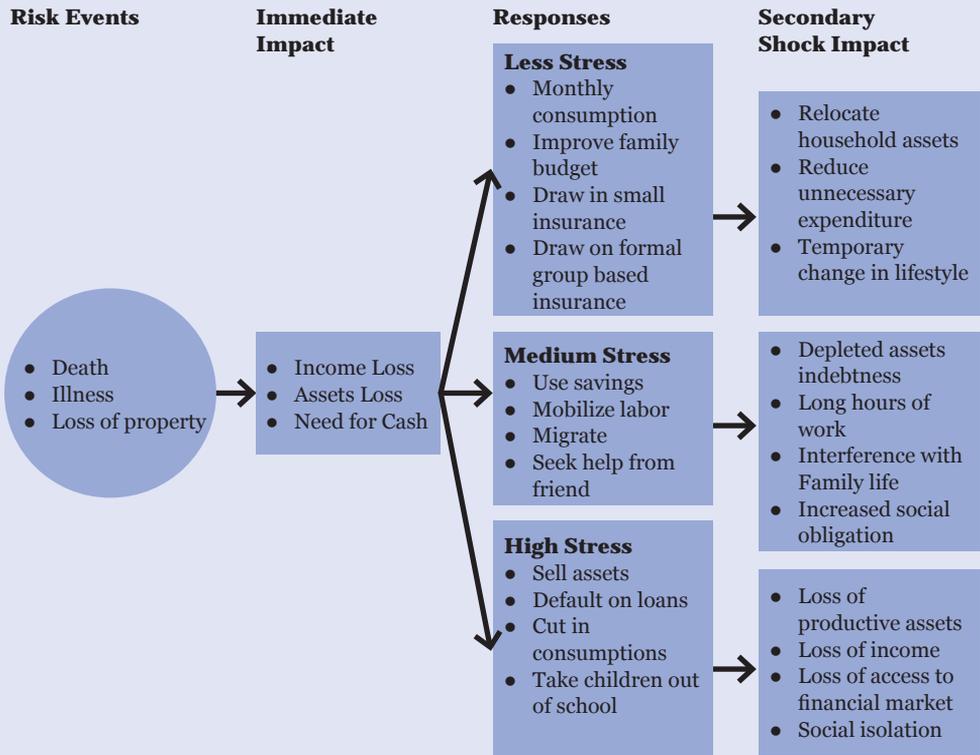


Table 24 lists idiosyncratic risks and possible mitigating tools for poor HHs

Different strategies for risk mitigation can be followed:

- **Non-financial Risk Mitigation:** These include practices such as vaccination of animals, soil and water treatment, among others.
- **Financial Risk Mitigation:** This means using various types of insurance products, which may help increase livelihoods security. These include products such as rainfall-based crop insurance, asset insurance and group-based health insurance. These products are available today and offered by various insurance companies, based on the pioneering work in developing micro insurance products for the rural market by BASIX.

The rural poor develop adaptation practices to cope with threats linked to climate variability, but the success of these practices depends on the nature of prevailing formal and informal institutions. Property rights, market barriers, family (patriarchy/gender), caste and other institutions regulate access to resources and have the potential to create exposure to risks.

Table 24: Idiosyncratic Risks and Suggested Mitigation Measures (for use in a livelihood intervention)

Risk of ill health, accidents etc.	Education on preventive methods and access to health care systems Providing access to insurance (life and health)
Non availability of wage employment	Arrange for tailor made consumption credit Cultivate savings habit Educate on and generate alternate means of employment. Migration – short-term or long-term
Split into families of low livelihood security categories	Facilitate acquisition of skills and resources by the family to take up appropriate economic activity Provide tailored consumption loan services Liquidation of assets to meet emergency needs
Crop failures due to drought, pest attack, diseases etc.	Technical assistance on drought and pest resistant crops, physical methods, cultivation practices, cropping pattern Dry land crop insurance for dealing with yield risk Index based rainfall insurance
Reduction in demand for the services or products offered	Offer consumption loans
Failure of yield on activities allied to agriculture like dairy, goat, sheep and pig rearing	Facilitate veterinary services Facilitate livestock insurance Provide market linkages
Trade, service and manufacturing	Insurance coverage for - life, accident, theft, fire etc.

The basic adaptation strategies, in the context of climate and other environmental risks to livelihoods, can be linked to the following risk management categories (Table 25).

Table 25: Adaptive Strategies based on Risk Management Category

Risk management category	Typical adaptive strategies
Mobility - risk distribution across space	Agro-pastoral migration, wage labor migration, involuntary migration
Storage - the distribution of risk across time	Water storage, food storage (crops, seeds, forest produce), animal pens, pest control
Diversification - the distribution of risk across asset classes	Asset portfolio diversification, skills and occupational training, cropping choices, production techniques, consumption choices, animal breeding
Communal pooling - the distribution of risk across HHs	Forestry, information gathering, disaster preparation
Market exchange - the purchase and sale of risk via contract	Improved market access, insurance provision, new product sales Warehouse receipts or micro-derivatives for dealing with price risk

4.3.1 Coping Strategies - Lessons from a Study of Drought Affected Villages

In this section, using an illustration we will draw out a suggested framework on coping strategies adopted by the poor.

The illustration is based on a micro-study⁸¹ carried out by the DFID, UK funded Andhra Pradesh Rural Livelihoods Program (APRLP). The study was done in the Anantapur and Mahabubnagar districts of Andhra Pradesh in 2002-2003 when BASIX was very active in those districts and many of its staff worked as observers in the study.

Drought is a recurrent phenomenon in both Anantapur and Mahabubnagar districts. However, the drought situation in 2002-2003 was particularly severe and its intensity was felt by all sections of society because of the cumulative impact of continuous drought for four preceding years. The recurrent drought conditions resulted in loss of crops, reduction of acreage under crops and income, severe shortage of fodder, and distress sale of livestock, reduction of employment opportunities and increase of distress migration in villages. Bore wells, open wells and tanks were the major sources of irrigation in the study villages. Water tables fell to record lows and water could only be pumped at the depth of 300-600 ft. Most of the bore wells - both agricultural and drinking water bore wells - had already dried up and even the few bore wells that supplied water at the time of the study were on the verge of drying up. Even if water was available, pumping it was a big problem as electricity supply was irregular. There was an acute drinking water shortage for both humans and livestock in Chinnababaipalli village. It was not a severe problem in the other study villages. People depended on the private bore wells of a few farmers for drinking water in Chinnababaipalli. Drinking water for cattle had become a big problem as most water bodies such as ponds, tanks, etc., had long dried up.

Table 26: Status of Water Sources in the Sample Villages

Village	Bore wells		Open wells		Tanks	
	Total	Dried	Total	Dried	Total	Dried
Thimmaipalli	45	41	8	8	2	2
Rangapur	80	25	25	21	2	2
Sivarampet	47	22	30	17	1	1
Chinnababaipalli	32	28	5	4	3	3

⁸¹ APRLP, 2002-2003. Drought and Coping Strategies: A Study of Four Villages of Mahabubnagar and Anantapur Districts.

Table 26 clearly indicates severe depletion of groundwater and the complete drying up of surface water in the four sample villages. Of the 204 bore wells, 116 had dried up. In Thimmaipalli, 41 bore wells out of the 45 had dried up. In Rangapur, of the 80 bore wells, 25 had dried up, while 50 open wells of the 68 had dried up. In Thimmaipalli, all the open wells had dried up. The same was the case with all the tanks (8) in the sample villages.

The drought situation had a negative impact on all sections of society in the rural areas and had affected their livelihoods. The farmers bore the brunt, as yields fell and the acreage under cultivation reduced. They suffered due to crop losses. All this had a cascading effect on several related areas, including the coping strategies of different categories of HHs. HHs in the study villages disposed of their liquid assets, defaulted on bank loans, electricity bills, etc., due to successive crop failures. Farmers lost not only their crops but also the seeds required for the next cropping season.

There was decrease in area under cultivation of paddy from 2001-02 to 2002-03 across all sample villages. Contrary to the general view that farmers opt for dryland crops such as *jowar*, *ragi*, etc., the study revealed that no such trend was seen in any of the villages and in fact, there was an overall shrinkage of crop acreage for all crops in all the villages. Perhaps this was largely due to the risks perceived in agriculture during extended periods of drought and also because migration offered an alternative livelihood option in these semi-arid areas. The area under groundnut, a dominant crop in Anantapur district, declined. When compared to the other sample villages, the area under cultivation of groundnut was more in Sivarampet. Castor, a dry crop, too showed a decline. In Thimmaipalli and Rangapur, the area under castor cultivation declined. The decline was more pronounced in Thimmaipalli. The cultivation of vegetables and mulberry had also reduced.

Livestock continued to be an important asset in the dry land areas. Drought not only affected farmers, but also livestock-rearers. The wild grasses that grow on the common pastures during the monsoon season had virtually been depleted in the study villages. With the near-total failure of crops, only small quantities of grass or weeds from the fields and virtually no crop waste or residues were available. The village's stock of dry fodder was almost exhausted. Farmers had to go in search of fodder or move to places where it was available. In most cases, livestock rearers sold their unproductive cattle and retained only productive cattle to cut costs.

In the study villages, it was found that cattle rearers and farmers with livestock sold cows and calves and retained bullocks that were valued more and were more useful for agricultural activities. However, some farmers in Sivarampet sold their healthy bullocks and cows, as they were unable to bear fodder expenses and they had no fodder with them. They sold them at very low prices, around Rs 2000-3000 per pair, knowing full well that if the need arose, the bullocks would cost them between Rs 7000- 8000, a pair. There was a steady decline in livestock population between 2002 and 2003. All the sample villages reported a substantial decline in livestock. The reasons for this trend included distress sale of livestock due to lack of sufficient fodder and to tide over these periods of lean income in order to meet HH needs. Thimmaipalli reported a fairly high decline in bullock population compared to the other villages. The population of cows, buffaloes, sheep, hens and goats also declined. Hens were mostly used for HH consumption and to meet the immediate requirement of small amounts of cash in the house.

To tackle the severe drought situation in these two districts, the government had implemented a series of relief measures that included Food for Work (FFW) Program, drought pensions, fodder camps, etc. Most of these programs were meant to soften the impact of the drought, especially on the more vulnerable, poorer sections, which did not have any wage employment opportunities for survival. However, problems abounded as the implementation of these relief measures was not transparent and corruption was all pervasive.

The untimely relief programs were also inadequate to address the scale and intensity of drought in the two districts. Some of the works such as trench digging and road-laying under the food for work program were un-remunerative and did not attract laborers. Drought pensions were distributed to a few in each village, but did not cover many poor HHs that deserved government support. Similarly, fodder camps were overcrowded and there was enormous pressure on the governmental machinery and livestock rearers or farmers, who barely managed to keep their cattle alive. Farmers from Chinnababaiapalli took their cattle to the cattle camp at Penugonda, while the villagers of Sivarampet shifted their cattle to a cattle camp at Pennahobilam, three kilometers away.

In order to face the recurrent drought and stress conditions, people adopted different coping strategies. It was found that people have a variety of coping strategies that see them through recurring droughts. Some of the traditional coping or support systems available to HHs during droughts were:

- Patron-client relationship or attached labor
- Family or kinship

- More subsistence and food crops
- More use of common property resources (CPRs)
- Migration
- Credit from moneylenders

Though most of these strategies had gradually changed over time, they had not entirely gone out of use for the poor HHs in the semi-arid areas. There were several reasons for the erosion of these systems, including changes in cropping patterns, break-up of traditional social systems such as the joint family and the patron-client relationship, demographic pressures on land, depletion of natural resources and CPRs, etc.

4.3.2 SRADH - Five Coping Strategies with or without Migration

Based on the APRLP study as well as several similar studies in southern Rajasthan's drought prone Dungarpur and Banswara districts, where BASIX was active, and our own experiences observing poor people cope with shocks, we suggest the following framework for classifying the numerous coping strategies adopted by the poor. These five strategies go beyond Scoones' (1998) threefold intensify-diversify-migrate approach and each is capable of being exercised in the area where one lives or by migrating. Thus, we treat migration as a sixth and separate coping strategy. Scoones appears to have missed out how the poor behave when coping strategies do not work and we have, thus, arranged the 'strategies' in descending order of desperation, from the most desperate to the least.

S – Sinking into seasonal bondage, small thefts and crime, sex work, starvation, chronic sickness, or even suicide.

R – Reduction of consumption or sale of assets (land, livestock, jewelry).

A – Adaptation – adjusting within existing portfolio of livelihood activities (e.g., small farmer moves from cereals to cash crops) or works in NREGA jobs.

D – Diversifying the livelihood portfolio (e.g., farmer starts a tea shop)

H – Higher Income due to sub-sectoral growth (e.g., soybean, mobile telephony) or spatial reasons (new industrial project nearby creates jobs or a tourist place opens up) or getting generous compensation for land acquisition by a project.

The five coping strategies are abbreviated as Sinking, Reduction, Adaption, Diversifying, Higher Income (SRADH) (which in Hindi and other Indian languages is the name of an annual ceremony, held to express gratitude to one's departed ancestors. In this case, we hope, it helps us be grateful to those less fortunate) and range from those with highly negative or negative consequences for the HH as in S and R, respectively, to neutral as in A and with positive or highly positive, as in D and H respectively.

Figure 16 illustrates the distribution graphically with income levels of poor HHs on the x-axis and the number of HHs on the y-axis. The y-axis line represents the poverty line and as can be seen, there is a skew in terms of higher number of the poor being below (to the left of) the poverty line. Every time there is shock, the number of poor HHs whose incomes decline further goes up and the whole curve shifts leftwards. In contrast, when there is economic growth which is equitable, the whole curve (distribution) shifts towards the right.

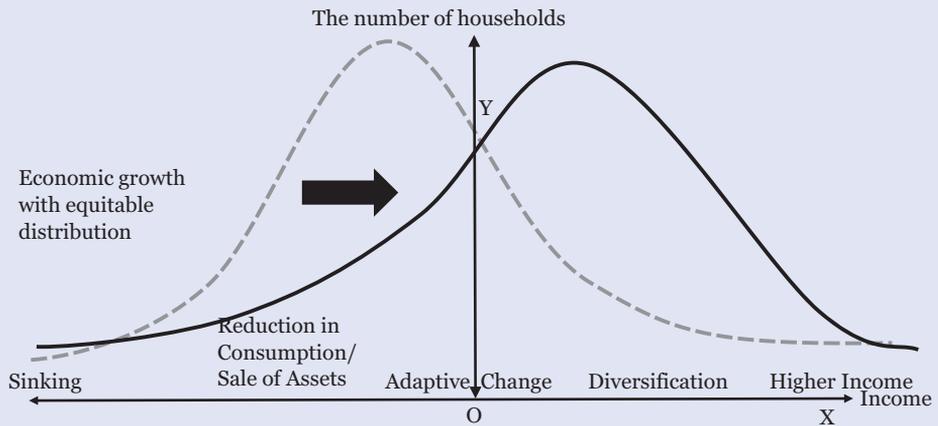
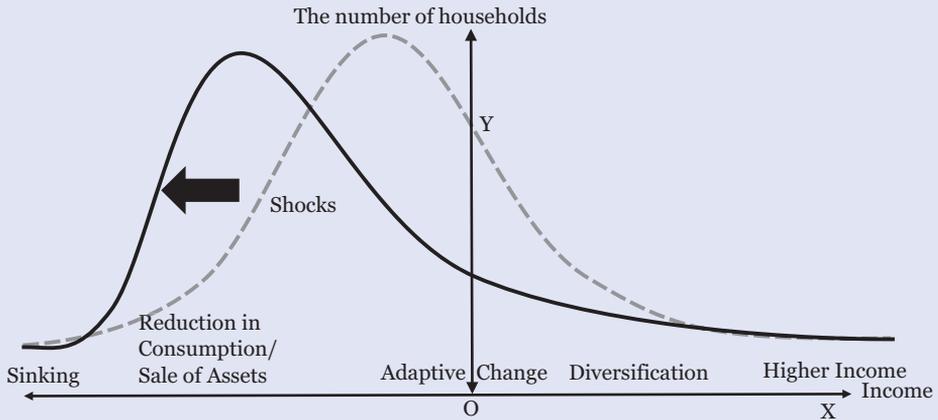
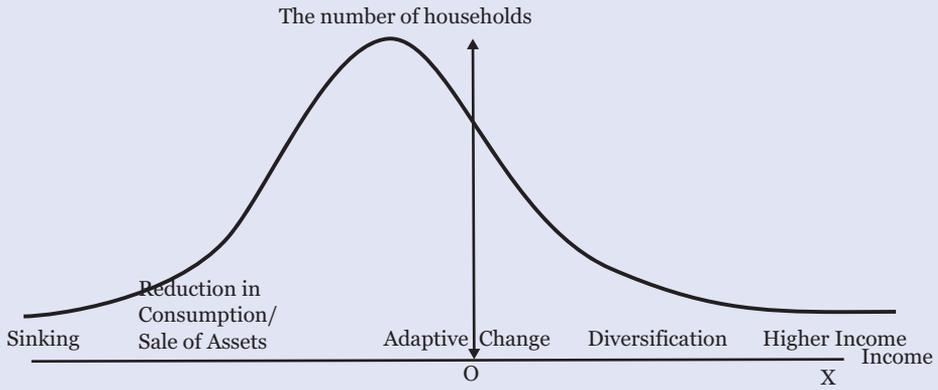
We illustrate the SRADH framework by continuing to use the details recorded in the APRLP study.⁸²

4.3.2.1 Small and Marginal Farmers

There were 62 sample HHs belonging to small and marginal farmers in the sample villages. A majority of the HHs had reduced consumption, as there were no earnings. With frequent crop failures, small and marginal farmers lost whatever investments they had made in land and with shrinking employment opportunities, the only means of survival was by reducing consumption expenditure. Festivals, always an occasion to celebrate with fervor, for the small and marginal farmers in the sample villages now were times to ponder as to how they could cut down their expenditure. Earlier, migrants always returned home to celebrate festivals with their families but now they chose to stay back, as traveling home meant unwarranted expenditure. The study team observed that marriages of daughters were postponed in some HHs. Unlike the past, the small and marginal farmers had no savings and had fallen into a debt trap because of frequent crop failures.

⁸² APRLP, 2002-2003. Drought and Coping Strategies: A Study of Four Villages of Mahabubnagar and Anantapur Districts. Note: Coping strategies shown in [] are introduced by the Resource Book authors.

Figure 16: Impact of Shocks/Favorable Conditions on Coping Strategies



Box 5: Coping Strategies of Small and Marginal Farmers

Surviving on Food for Work [Coping Strategy – Adaptation]

Boya Yerriswamy (35) from the Boya (B.C) caste of Sivarampet village is illiterate and works as a laborer for wages. His family consists of his wife, Kamamma (29), two daughters and a son. This year, in 2002, after returning from Mumbai they got 15 days of work at a road construction project under the FFW program. The couple worked for 15 days and got a bag of rice (70 kg) and Rs 300. At the time of the study, they were living on those earnings. Though the quality of rice obtained under Food for Work was inferior, it helped poor families like the Yerriswamys stave off hunger. His wife Kamamma, while getting rid of small insects from the rice they got under the scheme commented, “This is the food we eat. What can we do? We have neither work nor money. The drought had made us helpless. We have to be content with the rice given to us”.

For the elderly and the people who stay back in the villages, the rice obtained under PDS is an important coping mechanism during drought conditions. A majority of the poor families in the sample villages receive PDS rice every month. Though this quantity is not sufficient for the entire month, it provides some relief, as the price of rice in the open market is double of what they pay at the fair price outlets. The government responded to the drought through the FFW program and distributed drought pensions to the poorest. These schemes saved the poor from starvation. Though the quality of food grains given under FFW was inferior, at least it helped keep hunger at bay.

Selling PDS rice to meet medical expenses [Coping Strategy – Reduction]

Lakshmidēvi, aged 25, is a marginal farmer from Chinnababaiapalli. Her husband suffers from asthma and so cannot toil. Lakshmidēvi takes care of everything in the family. She works on the farm and sells vegetables in the neighboring villages. When her husband fell ill, she spent all the money she had with her. She then sold the PDS rice, charging one rupee extra on each kilogram to meet treatment costs.

Income from NTFP is an important income source for the women in Sivarampet and Chinnababaiapalli villages. The women weave mats or baskets and get the raw materials from the Common Property Resource (CPR) lands. They earn fairly well in the lean months. Collection of *tendu* leaves, plate leaves, *neem* and *kanuga* fruits is an important activity for the marginal farmers and agricultural laborers in Chinnababaiapalli. This activity is mostly carried out by women from February to April and it helps them earn some money to meet HH needs.

Diversifying into other livelihood activities [Coping Strategy – Diversification]

Imaam Saab, 48 years, lives in Sivarampet village. His wife Fatima, aged 42, works in the neighboring fields and is also engaged in making baskets, which she sells for Rs 9 and makes an important financial contribution to her family. Imaam Saab has a big family, including four sons and three daughters. Two of his four sons and a daughter are already married. He had five acres of land, which was distributed by the government (as D-Form: landless poor). He had no *patta* for the land. Fatima contributes to the family economically by selling vegetables. The drought had resulted in substantial financial loss, as their land remained barren and they were unable to cultivate any crops. Imaam Saab possesses a ration card through which they get 20 kg of rice, three liters of oil and one kg of sugar. Their sons Imaam Saab (Jr) and Basha migrated to Hyderabad but they have decided to come back to their village because of lack of work. Imaam Saab (Sr) and his wife Fatima were coping with the drought by making baskets and mats and by selling vegetables.

4.3.2.2 Landless

The plight of the landless poor during times of drought is pitiable since they depend entirely on daily wages. During drought there is little or no employment. With a fall in the area under cultivation, employment opportunities for landless agricultural laborers in the sample villages shrink. Since most of them had no assets, coping with the drought situation is very difficult. There were 15 landless HHs in the sample villages.

Box 6: An Illustration of Coping Strategy of the Landless

Learning new skills - [Coping Strategy – Diversification]

Allabaksh (25) is a landless migrant from Sivarampet and lives with his family in a rented hut. His wife Fathima (20) works as an agricultural laborer. Both of them are illiterate and do not own any assets like land, livestock or a house. They survive solely on wage labor. Allabaksh earns Rs 20 to 25 per day through agricultural and non-agricultural labor. He has no permanent steady work which can meet his family's expenses. Sometimes, the situation is so dire that they have to starve. They do not have proper clothes to wear and food to eat. To support her husband, Fathima learnt basket and mat making. She gets Rs 7 per basket or mat. Though it is very little, it still makes an important financial contribution to the family in these deplorable conditions. In Sivarampet, around 10 Muslim and three Erukala families were engaged in basket and mat making activities.

In order to cope with the drought, the landless reduce their HH expenditure. There is change in food habits and expenditure behavior in the sample HHs. In Thimmaipalli, the poor eat only one meal a day. In Chinnababaiapalli, the landless poor sometimes starve. They are forced to survive on wild leaves collected from the forest (Gadiraku) when all food stocks are exhausted and no credit is forthcoming. In Chinnababaiapalli, women left behind by their migrant husbands earn a livelihood by working in the houses of big farmers. In return they get food grains and have a credit access. In Sivarampet, laborers demand wages in kind as they are worried about food security.

4.3.2.3 Women-headed Households (WHH)

Women, in general, were more vulnerable to shocks and risks. With regard to women-headed households (WHHs), there is always the burden of running the family and also earning a livelihood, as there is no one to look after them. Along with HH chores, there is the additional responsibility of tending to cattle and agriculture and these women face more psychological pressure than other women. Compared to the other caste groups, the financial status of upper caste women is better (in Sivarampet village).

However, many of the WHHs of lower caste groups were living in acute distress conditions due to non-earning members in the family. WHHs were mostly non-migrants due to security problems and problems of looking after children, agriculture and livestock. They have few or no sources for credit. Early marriages (13-16), dowry and burden of family were common features of WHHs. The study observed both positive and negative coping strategies adopted by women in response to the drought. Positive factors included diversification of livelihood activities by undertaking vegetable vending and building of human capital through self help groups (SHGs). Brewing of illicit liquor was taken up. Working as housemaids with the local landlords and taking loans from moneylenders were other strategies.

Box 7: An Illustration of Coping Strategy of a Woman Headed Household

Brewing illicit liquor - [Coping Strategy – Sinking]

Lakshmi and her husband hail from Vanaparathi village but they have settled down in Rangapur. They migrated once to Guntur for seasonal employment. The family consists of three daughters and a son. The son is deaf and dumb, probably because Lakshmi and her husband are maternal cousins and their

marriage was consanguineous. After returning from Guntur, they used to earn some money by collecting grass from the forest for fodder. However, this arrangement did not last long as Lakshmi's husband contracted jaundice and passed away soon after, despite all efforts to treat him. After her husband's death, Lakshmi started brewing and preparing liquor in the house. Now, she sells it in the neighboring villages and makes a small profit. She also goes to the forest to cut grass. If she falls sick, there is nobody at home to take care of her and to earn in her place. Lakshmi's elder son got married three years ago. He took care of her for a year and left her after the birth of his daughter. Last year, her second daughter got married. She incurred a debt, which she is repaying at five percent interest. The police caught her many times in the past but she bribed the police and escaped.

4.4 Migration as a Coping Strategy

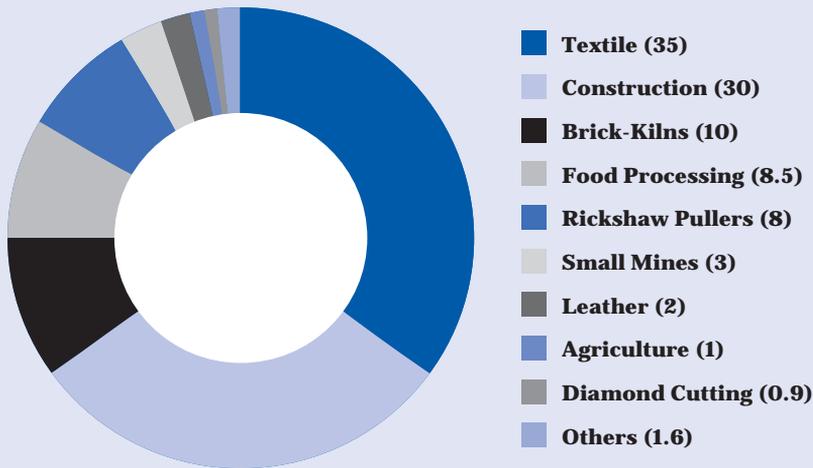
Migration, in search of livelihood, is a pervasive reality in India today. The bleak livelihood scenario in rain-fed areas, flood or drought-affected regions, high-density or conflict-ridden areas has meant migration is an effective survival strategy for a large number of poor people in the country. More than 100 million people,⁸³ almost one tenth of India's population, are believed to derive their livelihood out of seasonal migration. The construction sector and brick kiln work, employing 40 million migrants, is known to be the largest employer of migrant workers (**See Figure 17**). This is followed by employment in textile industries (35 million), food-processing (8.5 million), transportation, mines and quarries and agriculture (ibid). Within these sectors, seasonal migrants are mostly employed to do bottom-end tasks, which entail back-breaking labor and high risks; tasks that the local labor would be unwilling to execute.

Various forms of seasonal, short term or temporary and circular migration are the main types of migration and not permanent migration. Such migration has become a routine livelihood strategy that allows people to continue living in the village while accessing remunerative employment outside the village. The evidence gathered across India suggests that short-term and circular migration is growing, most likely due to improvements in roads, transport networks and communications and to maturing social networks which help migrants manage the risks involved in migration.

⁸³ Deshingkar, Priya, and S. Akter, 2009, 'Migration and Human Development in India', Human Development Research Paper 2009/13, United Nations Development Program.

Figure 17: Migration Labor per Sector

Migration Labor per Sector (in millions)



While there were debates on the impact migration had in bringing people out of poverty and decreasing inequality,^{84, 85} the centrality of its contribution to a HH's income basket is backed by data. For example, in Jhabua, a tribal district of western Madhya Pradesh, HHs in the three poorest quintiles were shown to earn between 65 to 70 percent of wage income from seasonal migration.

According to the NSS, 58 percent of internal migrants remit money home, with an average annual value of Rs 13,000. Male migrants remit more money than female migrants. The remittances improve the spending capacity of rural HHs. Of these, those who work in semi-skilled occupations remit the most (Rs 2,000 and Rs 3,000 monthly), as many were single and had migrated with the intention of remitting money home. For example, in Udaipur district in Rajasthan, an area with large numbers of tribal migrants, remittances accounted for between 42-48 percent of total annual household earnings.

⁸⁴ Mendola, Mariapia, 2008. "Migration and technological change in rural households: Complements or substitutes?", *Journal of Development Economics*, Elsevier, vol. 85(1-2), pages 150-175, February.

⁸⁵ Taylor, J. Edward. June 2006". International Migration and Economic Development" International Symposium on International Migration and Development. Turin, Italy.

Another study of six villages, across three diverse regions in Madhya Pradesh, showed that remittances accounted for 30 percent of total HH earnings. Remittances received by the poorer sections of society can have a substantial impact on the standard of living of the receiving HHs. Remittances enable higher spending on education, health, HH consumption, human capital formation and small enterprises. Where opportunities exist and where consumption goals have been satisfied, remittances are used for investment purposes. Moreover, the literature argues that remittances support economic growth and poverty reduction, if they were properly harnessed. Even if remittances do not reduce poverty, they may help the HH to maintain its standard of living.

In a longitudinal analysis of the impact of migration on the rural labor market and rural society, Rodgers et al⁸⁶ point out:

“The potential for sustained growth (through migration) is certainly present. But the existing institutions, both state and social institutions in the village were clearly inadequate. It is necessary to think how the state could take advantage of this opportunity for growth by providing incentives, the institutions and the public investment in infrastructure which can convert this potential to reality.”

There is an imminent need to come up with solutions that can possibly transform work opportunities for migrants into a more lucrative means of livelihood.

4.4.1 Who Migrates? When and Where?

Economic approaches to answer these questions focus on individual behavior and emphasize positive aspects of migration. Todaro's⁸⁷ pioneering analysis of rural-urban migration is well-known. Push-pull models were an extension of this. These analyses assume that migrants act individually according to a rationality of economic self-interest. The decision to move to cities would be determined by wage differences, plus expected probability of employment at the destination.

⁸⁶ Rodgers, G. and J. Rodgers, 2001, 'A leap across time: When Semi-feudalism met the markets in rural Purnia', *Economic and Political Weekly*, 2 June 2001, pp. 1976–1983.

⁸⁷ Todaro, M P, 1969, A Model of Labor Migration and Urban Unemployment in Less Developed Countries, *American Economic Review*, 59, I, 138-48

In the ‘new economics of migration’, Stark⁸⁸ extended the Todaro model, by emphasizing HHs rather than individuals as units of analysis, and remittances as an inter-temporal contractual arrangements between the migrant and the family.

Managed by private labor contractors and social kinship networks, migrants show clear trends in movement across regions – people from a region move to work at a certain specific destination, the choice being determined by a range of factors – a leading one being social contacts/networks.⁸⁹ While providing a safety net and access to job opportunities, these informal networks, however, tend to perpetuate caste and gender relations and often limit the mobility of workers up the value chain. Gupta and Mitra⁹⁰ also observe that in the informal labor markets, which were the primary destination for workers, jobs were highly segmented across lines of caste, religion and kinship. Causes of such segmentation were complex, and historically determined.

Such segmentation may lead to unequal access to opportunities. Families, that were slightly less poor and somewhat more food-secure, migrate less often with the whole family. They send out young men, for relatively short periods of time and short distances, and combine migration with agricultural work in the home village. The poorer migrate more often with all members of the family, for longer periods. Among these groups, female migration tends to be high. Whereas for the poorest families migration is an option of last resort and often a reaction to indebtedness, those who were less destitute use migration as a means to reduce vulnerability and for some investment in agriculture.

There is often an unresolved question of causality: were migrants richer or more educated because they have migrated, or do they migrate because they were better-off?⁹¹

Migration needs investment, for transport, for food during the journey, bribes for employment officers or officials implementing immigration and settlement policies, and it needs contacts - assets that the poor were less

⁸⁸ Stark, Oded (1991). *The Migration of Labor*. Basil Blackwell, Oxford.

⁸⁹ de Haan, Arjan and Ben Rogaly *Labor mobility and rural society* edited by. (London: Frank Cass, 2002, pp. 200)

⁹⁰ Rural Migrants and Labor Segmentation: Micro Level Evidence from Delhi Slums A. Mitra and I Gupta. *The Economic and Political Weekly*. Vol XXXVII, No. 2, January 12. 2002.

⁹¹ de Haan, Arjan 2000. *Migrants, Livelihoods and Rights: The Relevance of Migration in Development Policies*.

likely to possess. HH composition may play a role, as HHs with fewer earning members may be less likely to take up opportunities for migrant work. Also, migrants do not necessarily come from the poorest areas, as physical infrastructure is crucial for people to migrate, particularly if they migrate regularly.

Micro-studies undertaken by different organizations show two broad types of migration among the wider category of the poor.

- Migration undertaken by the poorer, least educated, and most disadvantaged social groups (mainly SCs, STs, and Extremely Backward Castes) typically to work in brick-kilns, unskilled construction, loading and unloading of trucks and in agriculture, where living and working conditions leave much to be desired. Such migration may allow only slow asset accumulation, but it does prevent a downward slide into poverty.
- Migration is undertaken by slightly better off groups, with more education and skills, more assets, and a higher social standing. Backward Castes were heavily represented in such migration, typically working in small industrial units, in security services, as drivers, in the hospitality industry and in plumbing and carpentry. Though many such jobs were in the informal sector, this second type of migration often leads to substantial remittances, asset accumulation, and investment which can lead to an exit from poverty.

Box 8: Migration Caused by Drought

Drought had affected the livelihoods of most HHs in the study villages in various ways.⁹² Continuous drought had increased their vulnerabilities in terms of basic HH consumption expenditure, availability of credit, food security, maintenance of livestock, etc. This had forced most HHs into adopting various coping strategies to tide over the crisis as mentioned earlier. However, the various coping strategies adopted by the HHs were found to be inadequate in mitigating the ill effects of drought, as agriculture, agriculture-related diversification as also non-farm diversification were limited in these villages. In addition to this, the short-term nature of government interventions had not really helped people in coping with the severe drought.

It is in this context that migration is seen as an important livelihood diversification and coping strategy by most poor rural HHs in the semi-arid areas such as Anantapur and Mahbubnagar districts. In fact, migration and remittances through migration had overshadowed all other coping strategies for most HHs in the study villages during this drought year.

⁹² APRLP, 2002-2003. Drought and Coping Strategies: A Study of Four Villages of Mahabubnagar and Anantapur Districts.

First-time migrant

Devojee, his wife Roopli, their six daughters (three were married) and two sons and Devojee's mother Motiamma (60) made up the household. They were the inhabitants of Thimmaipalli *thanda*. His elder son was married. The couple had a two year-old daughter. There were 10 members in their HH. The persistent drought since the last three - four years had forced their elder son to migrate to Mumbai along with his wife and daughter for the first time. Devojee had never migrated in his life.

He always managed to sustain himself because of his livestock and by doing agricultural labor in the village. He used to have 20–30 goats, but now only four were left because the others have either died or have been sold. Out of his five hens, two were dead. The continuing severity of drought had severely affected his economic position.

Devojee was very worried about his son. He had never seen Mumbai and his son is a first-time migrant. His son will have to find a place to stay there and then find some employment as a wage laborer. The presence of other migrants from the *thanda* will help. Devojee gave his son Rs 2,000 when he went to Mumbai. He hoped that this would give them security till they found some work. Devojee hopes that his son finds work and settles down soon so that he can send some remittances home. They left for Mumbai because there was no income in the *thanda* and as the elder son, he had a responsibility to help his family at a time of financial insecurity.

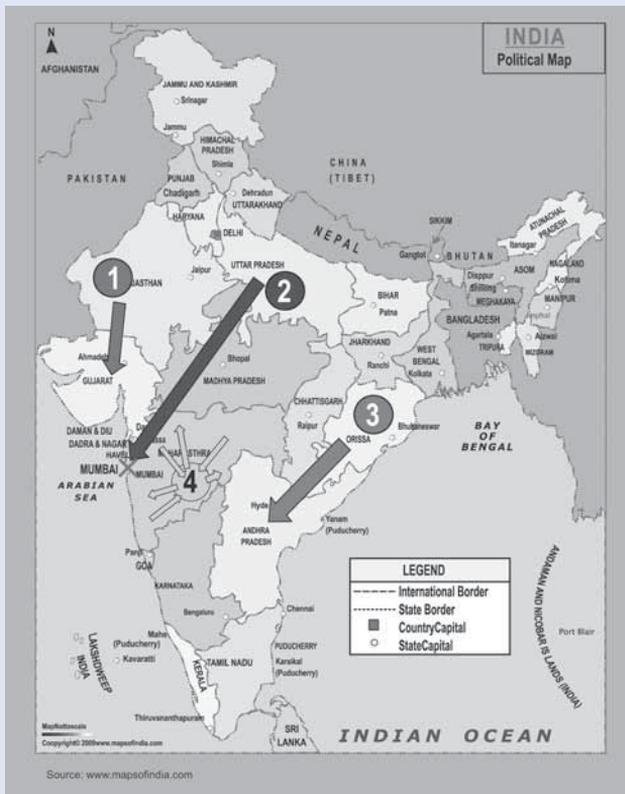
4.4.2 Major Migration Corridors in India⁹³

There were 3.4 million migrants in Mumbai from UP, many from Eastern UP, a poverty stricken area where migration had emerged as an important livelihood strategy. After Delhi, Mumbai attracts the largest number of migrants from UP. In Mumbai, these migrants mainly work in trade, hotels, transport and communication (39%) and in manufacturing (34%). Migrants from Odisha go mainly to Chhattisgarh, West Bengal and Andhra Pradesh. The total number of migrants from Odisha in Hyderabad is 0.6 million. About 71 percent of migrants going to Hyderabad were occupied in construction.

⁹³ Remittance Needs and Opportunities in India, Thorat and Jones, 2011.

Intrastate migration within Maharashtra - Intrastate migration within Maharashtra accounts for as many as 32.8 million migrants, of whom around 16 percent migrate to Mumbai. Of the total domestic migration in Maharashtra, 88 percent is intra-state and only 12 percent interstate. Of non-Mumbai based intrastate migrants, nearly 68 percent were employed in agriculture and allied industries, while for those intrastate migrants in Mumbai, just 20 percent work in agriculture and allied industries, 23 percent in trade, hotels and transport, and 18 percent in manufacturing.

Figure 18: Major Migration Corridors in India



4.4.3 Supporting Migration as a Coping Strategy⁹⁴ - Some Experiences

In the recent past, some focused interventions have addressed certain specific vulnerabilities faced by migrants. The *Aajeevika* Bureau in Udaipur, Rajasthan

⁹⁴ Excerpts from UNESCO - UNICEF National Workshop on Internal Migration and Human Development in India | Creative Practices and Policies for Better Inclusion of Migrant Workers

was a pioneer in this field. Certain NGOs in Odisha, Maharashtra and Gujarat worked on integrating children, from migrant HHs, who were school dropouts, back into the formal schooling system. *Labornet* in Bangalore had made attempts to establish a credible interface between informal sector workers and employers, addressing problems of information asymmetry in informal labor markets.

These specialized migrant support programs have been categorized by Deshingkar et al⁹⁵ into four broad categories – social protection model, market-led approach, unionization model and rehabilitation model.

4.4.3.1 The Aajeevika Bureau, Udaipur

Aajeevika Bureau is an example of a **social protection model** which strives to work with migrant communities at both source areas and destination areas, and to address the specific vulnerabilities of both places.

With the mandate of improving livelihoods and social security for migrant workers, *Aajeevika* Bureau works in a pocket of high out-migration in Rajasthan in the western part of India. The initiative includes a comprehensive set of services aimed at reducing hardships, enabling access and facilitating better returns for vulnerable migrant groups. Unlike earlier development interventions that tried to address rural deprivation and urban exclusion in isolation, this initiative treats mobility as a given and works with migrant groups at both source areas and destination areas. This section gives an overview of the core migration services piloted at *Aajeevika* and dwells on the operational model adopted for their delivery, while also discussing their impact.

Creating Migrant Facilitation Centers

The initiative is anchored by a network of walk-in resource centers for migrant workers, namely, *Shramik Sahayata evam Sandarbha Kendras*. These centers work as the operational nodes of the model, offering pre-departure counseling, access to information and targeted services to workers. They were functional at both ends of the migration corridor – the source and the destination. At the source, the centers were based at the block level, while at the destination, they were set up close to either the work sites or residence of the targeted migrant community.

⁹⁵ Support for migrant workers: The missing link in India's development: Deshingkar, Khandelwal and Farrington, 2008. www.odi.org.uk/resources/docs/3343.pdf

Migration Services and Solutions



Addressing concerns related to identity and establishing numbers

As a response to lack of documentation and valid identity proof, the centers carry out the process of registration and issuing of photo IDs to workers. With the help of a simple registration form, important demographic, migration and work-related information are collected. Verification is done with the help of the head of the *panchayat* and an identity card is issued to the workers. The photo IDs were recognized by the Rajasthan Labor Department through a government order. This simple yet powerful innovation resulted in securing the identities of a mobile and vulnerable population. It had gone beyond a mere proof of introduction and is serving as a gateway to banking services and in getting SIM cards and gas connections at the destination.

There were several instances where it had helped workers avoid harassment by the police and civic authorities. The card had also been used by workers left out of the voter ID registration process at the source to vote in elections. The most important contribution is the visibility that the card had brought to seasonal migrants who otherwise remain invisible in the urban space. Till date, the Bureau had registered more than 60,000 migrant workers. This initiative had also helped the larger goal of creating a database of migrants at the block level. Details provided by migrants were digitized with the help of registration software and shared with the Rajasthan Labor Department on a quarterly basis, thus, building strong evidence on inter-state labor mobility from southern Rajasthan and impacting the policy agenda of the state.

Vocational skill training and placement services

These were aimed at helping rural youth upgrade their skill-sets and enter the labor markets with greater competitive advantage. Given that the target group is already in the labor market, focused short-term training courses have been designed that provide rigorous inputs on both theoretical and practical aspects of the trade. There is an emphasis on hands-on training where trainees spend close to 60 percent of the training time on worksites. Imparting specialized inputs in life-skills is a vital component of this program.

Sessions were conducted on improving communication, self-confidence, and interaction with customers with the intention of improving employability and retention of the youth in the labor market. Inputs were provided on time and stress management, legal and financial literacy and on managing both occupational and health risks. In addition to direct training, the centers offer job counseling, short-term preparatory trainings, life skills training and linkages to placement opportunities. Elaborate tools for testing person-job fit, systematic evaluation and periodic follow-up mechanisms help ensure quality and test the final impact of the training.

By Dec 2011, *Aajeevika* had trained 1,822 youth and provided placements for 3,026 youth. The initiative to help the youth upgrade their skill-sets and diversify to organized work settings, however, had been fraught with challenges. In particular, taking this intervention to scale had been a test for the Bureau. The manner in which present day labor markets are structured is such that entry-level wages in the organized settings are lower when compared with casual daily wage work. This becomes a serious deterrent to encouraging rural youth to diversify to organized sector jobs. A bigger problem is that of resources for skill development, especially for sectors such as construction. While the state programs focus on skills on the higher end of the spectrum, such as computer training and retail, the corporate sector absolves itself of all responsibility – it needs skilled labor but is not ready to make required investments in skill building.

Legal Support and Platform for Collective Action

The walk-in resource centers offer legal counseling, arbitration services and legal literacy to workers. In case of a dispute, workers can approach the centers to register their case and seek counsel or aid. This process of intermediation is institutionalized through regular legal clinic days. Legal clinic days were adaptations of the formal court mechanism, wherein disputing parties were given an objective hearing and advice by a trained lawyer. The center plays the role of an objective arbiter between the complainant and the offenders.

There is an emphasis on resolving disputes through intermediation and negotiation, rather than litigation, which can be expensive and hugely time consuming for workers to pursue. Only the more complex cases that were not amenable to arbitration strategy were taken to the labor court. So far, *Aajeevika* had resolved 550 disputes and facilitated compensation worth Rs 52 lakhs.

The overwhelming number of cases that reach the center, however, pertain to wage payments and were limited mostly to male workers. Instances of disputes being reported by women were less and the initiative to reach out to female workers continues. Further, while elaborate mechanisms have been developed for settling disputes in cases of short-distance movement, there is a need to develop response mechanisms for long-distance migration. Nevertheless, the success of the legal-aid service offered by the Bureau so far and the high rate of calls to the Labor Line demonstrates that there is a great need to provide fast-track dispute redressal forums to workers in the unorganized sector.

Aajeevika launched a phone-based helpline called Labor Line for workers in Udaipur in August 2011. The helpline involves a dedicated phone line answered by a trained counselor. It allows workers to reach out for counsel in case of problems related to wages, retrenchment or abuse. Effort is being made to create a wider support network which can respond in case of emergencies. In a period of less than six months, Labor Line had received more than 600 calls, 350 of them being from a small destination city of Udaipur.

Financial Inclusion Services

The *Aajeevika* Bureau had promoted a specialized agency called *Rajasthan Shram Sarathi Association* (RSSA), a Section 25 Company that offers targeted financial services to migrant workers moving from southern Rajasthan. The initiative had been quite successful in linking the migrant workers to a diverse range of financial products such as micro-credit, insurance and pension. Micro-loans offered by RSSA help migrants to prevent abrupt breaks in the migration cycle and help women to manage volatility in cash flows through informal savings instruments at the source areas. It is a decentralized model that had the ability to cater to the various life-cycle needs of the clients. Under its financial inclusion program, migrant workers were linked to bank accounts at both source and destination – the major objectives being promotion of savings and facilitating remittances. This service is much in demand, especially at the destination, where the banks have started accepting ID cards issued by the Bureau as a valid document to satisfy their Know Your Customer (KYC) requirements. It deserves mention, however, that this acceptance is limited to some banks and often depends on the sensitivity levels of branch managers.

Migrant workers were also linked to different social security provisions of the state and insurance products available in the market. Lately, workers were being linked to the Construction Welfare Board in both Rajasthan and Gujarat.

Access to essential services at the destination

In addition to the services mentioned above, facilitation centers at the destination help migrants link up with health and banking services. Community kitchens have been promoted in Ahmedabad in partnership with Hindustan Petroleum Corporation Limited (HPCL), where workers have access to subsidized Liquefied Petroleum Gas (LPG) at the rate of Rs 6 per hour. Regular advocacy events were organized and there were efforts to create a healthy interface between civic authorities, police and migrant worker communities. An important strategy in service delivery in cities is formation of trade-based collectives.

At the destination, migrant workers live in groups that were dispersed through the expanse of the city. This greatly constrains their chances of coming together or exercising collective bargaining power. The trade-based collectives promoted by the Bureau serve as unique platforms for the workers to come together, find solutions to their common problems and negotiate with the government for their rights. Regular inputs on leadership building and technical skills were imparted to the collective members. Many collectives have organized public hearings to protest against human rights violations such as atrocities committed against migrant workers and to advocate for access to amenities at the labor congregation points. These collectives also serve as vehicles for service delivery on food, health and banking.

Strengthening support systems for migrant families at source

A range of family support and empowerment programs were carried out in the source areas. These programs, while addressing specific vulnerabilities faced by migrant HHs, play a crucial role in helping migrants complete their migration cycle successfully. There were special initiatives for enabling the access of women to public welfare schemes, promoting food security and agricultural outcomes, and linking families to specialized healthcare services.

Under the leadership of change agents from the community, women from migrant HHs were mobilized into common-interest groups that serve as platforms to facilitate negotiation in public space and enable mutual support. Through these programs, families have also come to benefit from better access to work entitlements and social security schemes.

A strong emphasis on individual and group education directly empowers women to equally gain from the benefits and thrive despite the challenges of male migration. The family support programs were carried out in close partnership with *panchayat* representatives. One of the early outcomes of these interventions was the authorization by the Rajasthan Labor Department of the photo ID issued by *Aajeevika*.

This was the first ever example of a state government's acknowledgment of the high incidence of labor migration and its decision to take a concrete step towards better documentation and management of the phenomenon. Advocacy efforts by the Bureau have also led to inclusion of Rajasthan migrants in the Construction Worker Welfare Board of Gujarat. The Bureau had also been an active participant in the Rajasthan Construction Worker Welfare Board for the design and delivery of welfare programs.

4.4.3.2 Social Protection of Migrants by Enabling Portability of Entitlements

As a measure to address food security concerns, efforts have been made by civil society organizations to help migrants access subsidized rations through temporary ration cards in cities. The Government Resolution (GR) passed by the Maharashtra government on 9th November 2000 to ensure portability of ration cards, acknowledges the vulnerabilities of migrant communities and the problems they face in obtaining and producing documentary proof of their identity and residence. Certain relaxations were proposed under the GR that would enable migrants to access subsidized grain and fuel in destination cities.

Ration Kruti Samiti, a network of civil society organizations in Maharashtra, working with the urban poor was instrumental in the passing of the GR. The network had reached out to both inter- and intra-state migrants, who constitute the majority of the urban poor population. Disha, a pioneer organization working on migration in Nashik, used this GR to help seasonal migrants in Nashik get temporary ration cards for a period of four months (extendable to 12 months) with relaxed documentary requirements. As per the existing practice, a migrant is required to cancel his card on departure so that his/her ration entitlement at the origin can be renewed.

4.4.3.3 Labornet

As an effort to mainstream unorganized workers and link them gainfully with the urban labor market, organizations such as Labornet, Bangalore, set up elaborate systems for member registration, certified training and placement. This is an example of the **market-led approach**.

The registration process aims to formalize the identity of informal sector workers across trades and occupations. A social enterprise, Labornet had both a profit and non-profit component in its work as it actively provides an interface between workers and employers.

This interface, a charged service for employers, offers them a centralized and convenient access to trusted, certified workers. To the workers, it offers regular access to jobs with social security safeguards and skill upgradation opportunities through a mix of technology and an apprenticeship system. The organization had so far developed a database of 45,000 workers and offers wide-ranging services on financial inclusion, linkage with social security and welfare schemes to unorganized sector workers.

4.4.3.4 Organizing Migrant Unions to Assert their Rights (Unionization model)

The Maharashtra Sugarcane Cutting and Transport Workers Union (MSCTWU) is a trade union of the sugar field workers of Maharashtra and is affiliated to the Center of Indian Trade Unions. In October 2002, lakhs of cane cutting workers stayed away from work to protest against the organized attempts to mechanize cutting of sugarcane in the state and fearing permanent loss of income in future because of the use of harvesters. The article below shows the condition of the migrant sugarcane cutters.

Box 9: An Illustration of a Migrant Sugarcane Cutter

Maharashtra's Crushed Labor

Bleary-eyed, Shivaji Randale wakes up in the biting cold at 3 a.m. and makes his way, along with his *toili* (group of around 10 workers), to the sugarcane fields in Baramati in Maharashtra's Pune district. He had been able to snatch only two hours of sleep. But sleep does not matter when there is a loan to be worked off. By afternoon, he loads his bullock cart with the cane his family had cut, and leaves for the crushing factory. There, he waits in queue until late at night. For some others, the wait could last till the next day. Yet, after laboring round-the-clock, Shivaji may not be able to work off the advance he had taken from the contractor.

Before leaving their village in Beed district, around 200 km away, his family was given Rs 20,000 by the contractor, which is set off against the quantity of sugarcane they cut. Like most migrant workers who travel from the dry

Marathwada region to western Maharashtra's sugarcane belt in search of work, Shivaji may return to his village with a debt to repay. "If, at the end of the season, we have not cut enough cane to set off the advance given to us, we have to pay back the rest of the money. The rate of interest on this loan is 60 percent a year", he says. (Workers from Nandurbar and Dhule in northern Marathwada travel to Gujarat's sugar factories. Similarly, many workers from Karnataka cross the border into Kolhapur's sugar fields.) The sugar mills have made it even more difficult for the migrant workers to shake off their bondage. Ever since 2001, when the sugar cooperatives began using imported cane harvesting machines, not only have the number of the workers reduced, but their working days have also dwindled.

"This season, we've got work for only 20 days in a month. How were we supposed to pay back the contractor? We've travelled this far to work - not to sit here, twiddling our thumbs", says Shivaji, who cuts cane for the Shri Chattrapati factory in Nationalist Congress Party (NCP) leader Sharad Pawar's parliamentary constituency, Baramati. This factory and the Malegaon cooperative in the same region, were among the first to use the cane harvesting machines. So far, 12 cooperative factories have decided to purchase altogether 25 cane cutting machines.

Political bosses, who effectively control Maharashtra's cooperative sugar factory syndicate, have taken a special interest in importing the machines, each costing around Rs 1.2 crore, from Germany and Australia. They have even urged the Central government to waive the 32 percent import duty on the machines. Maharashtra's sugar barons, many of whom were Congress (I) or NCP ministers, have built their fortunes on the labor of more than a million migrant workers. But now, the sugar lobby is gradually replacing the laborers with these harvesting machines, each of which can deprive 300 to 400 workers of their source of livelihood, thereby pushing them deeper into debt. (Each machine can cut 300 to 400 tons a day.)

Also, workers transporting cane to the factory on bullock carts have to wait, for up to 36 hours, as priority is given to sugar cane cut by machines. When the machines were first introduced at the Shri Chattrapati factory in January 2001, some workers, frustrated with the long delay, held an agitation spontaneously at the factory. Several of them were arrested and work in the factory was disrupted. This was not the first time that the laborers had fought back. Several strikes demanding better pay and working conditions have been squelched by the powerful sugar magnates. Conditions of work have not improved for decades.

Every year after celebrating Deepavali, groups of workers leave their villages knowing that they may not find work. The migrants, with their cattle and meagre belongings, were herded into trucks and taken from the arid Marathwada region to the lush sugarcane belt. Inhabitants of entire villages were transported. They included barbers, shopkeepers and cobblers; only the elderly and a few children, whose parents preferred to keep them at school, were left behind. But the education of most children is disrupted. “Which school is going to take them? They spend six months here and the rest in the village. Even our children don’t have a way out of this kind of work”, says Sultana Hanif from Parbhani, whose three daughters were with her. There were only 30 schools for migrant children around the State’s 198 sugar factories.

The workers were of two types - the ones who use bullock carts and the ones who use tractors to move from village to village to transport the cane. For both categories, the working hours blur from one day to the next. Workers using bullock carts often wait until dawn outside the factory in miserable conditions. “Look at the state of this yard. We have to sit amidst cow dung all night. They don’t even clean the place or provide basic facilities like water, a shed or even proper pathways for the bullocks”, says Ganpati Shankar Kumbar, a worker from Karnataka who had come to Kagal in Kolhapur.

The tractor-borne workers were hauled up at any time of the night to load the tractor. Bonfires were the only source of light and warmth as they work at night. For these workers, there is barely any shelter. Those with bullocks build straw huts on the outskirts of villages. The tractor-borne workers pitch tents, which they shift every two or three weeks, as they move to another village. Some have no place to live. Like Ganpati Kumbar, who snatches a nap under his bullock cart, while waiting in queue. “What hut? This is my home”, he says, pointing to his cart. What makes them leave their homes to endure these harsh working conditions? Why do they come here, uprooting their families and disrupting their children’s education? “There’s no water in our fields. If the government irrigated our land, we wouldn’t have to come here”, says Janabai Marade from Beed, whose family owns 12 acres (4.86 hectares) of land.

“During a good monsoon we can grow some *jowar* or groundnut. After that, there is nothing. Barely a few days of agricultural work, which pays a pittance of Rs 20 a day for women”, she says. The farming crisis had made agriculture unviable for several farmers like her. Agricultural growth (in terms of production and income) decelerated in the 1990s. Investment in rural infrastructure, including in irrigation, had dropped.

The removal of subsidies had increased input prices, while produce prices have fallen in the wake of liberalization. Farmers' profitability had taken a tumble, sharpening indebtedness.

Trapped in a cycle of loans, workers keep coming back to the sugar factories every year. The need for a lump sum advance for consumption expenditure, to get their children married or pay medical bills, makes the workers approach the contractor. Families repay in labor by cutting between one and two tons of cane a day, at the rate of Rs 100 to Rs 115 a ton for bullock cart-borne workers and Rs 65 a ton for tractor-borne workers. The bullock cart-borne workers were paid advances between Rs 15,000 and Rs 25,000 a family, while the tractor-borne workers' families were given up to Rs 15,000.

Uttam Siserao, a landless laborer from Parbhani, is working for free this season. While waiting for work in a shed outside the Dutta sugar cooperative factory in Kolhapur for the third day, he explains, "My wife was ill last year, and could not work. We had taken Rs 10,000 from the contractor. I worked off Rs 5,000 and the other half was due. After that she passed away. This year I am repaying the advance she had taken." Most workers use up the pay advanced in the village itself, and then buy their daily food requirements by selling the sugarcane leaves as cattle fodder for Rs 20 to Rs 25 a bundle. "We leave home with nothing and return home empty-handed. When we return to the village, it's back to borrowing and agricultural work," says Sarubai Auchar, who had also migrated from Parbhani. It is not surprising that these migrants work under the most insecure conditions with minimal legal protection. Their employers also run the government. Moreover, since workers were scattered in different places, they do not constitute a strong vote bank. "Sugar is the most organized industry, but this sector had the most unorganized workers," says Kumar Shiralkar, leader of the Sugarcane Transporters and Workers Union.

Although the factory pays their advances through the contractor, it refuses to acknowledge them as workers. "They should be given the same benefits and status as those working inside the sugar factory," says Shiralkar. No labor laws were implemented to protect their rights. Considering the distinctive nature of their work, the union is demanding the setting up of a *mathadi* board with which every worker can register and which will regulate their working conditions. However, the sugar syndicate seems to be against this idea. "Since our factories work for only six months in a year, we would like to keep a contractual relationship with the workers. Anyway, the whole labor issue will die in the course of time as harvesting machines come in."

If all the factories buy the machines, we will save up to Rs 691 million every year - Rs 12 a ton of cane”, says Prakash Naiknavare, Managing Director of the Maharashtra Cooperative Sugar Factories Federation. At present, the sugar cartel revises the wages every three years.

Although India is the world’s largest producer of sugar and the industry is growing at the rate of 8.5 percent a year, the industry neither provides its workers with basic facilities nor shares profits with them. The 192 sugar cooperatives provided the platform on which many Congress and NCP Ministers could build their fiefdoms. The Bharatiya Janata Party is also now apparently trying to get into the act by indirectly sponsoring the setting up of private sugar factories.

Local farmers and economies in western Maharashtra benefited from the infrastructure development that accompanied the establishment of factories. For instance, although sugarcane constitutes only three percent of the total area under cultivation in the State, the water-intensive crop corners 60 percent of the State’s irrigation supply. The Marathwada districts, from where the workers migrate, have an irrigation cover as low as six percent. On the whole, Maharashtra had a low irrigation cover of 15 percent, way below the national average of 38 percent. But irrigation facilities for sugarcane were abundant. Patronage politics and vote banks have developed in the sugarcane belt. But the migrants themselves do not constitute a vote bank. So it is convenient to keep them tied to the contractors, generation after generation. “Politicians have risen by climbing on the backs of these bonded workers,” says Shiralkar.

Krishna Pawar, a worker who had migrated within Kolhapur district, puts it eloquently: “We cut the cane, but we do not get to taste sugar, not even a pinch.”

‘Maharashtra’s Crushed Labor’: Dionne Bunsha. *Frontline*, Vol. 19: No. 03, February 02 - 15, 2002. Accessible at: <http://www.frontline.in/navigation/?type=static&page=flonnet&rdurl=fl1903/19031020.htm>

In another example of the **Unionization Model**, in Rajasthan, Prayas Center for Labor Research and Action has been a leading agency, working by unionizing vulnerable migrant streams. It focuses on specific migrant groups, such as those working in the cotton ginning, brick-kiln and construction sectors. The model rests on extensive mobilization of workers to help them assert their rights collectively and promotion of their unions as platforms to negotiate with employers, contractors and the government.

They have used the media extensively for creating public sensitivity around problems faced by the highly vulnerable migrant populations.

This initiative had met with substantial success through checking of child labor trafficking to Bt cotton seed farms in northern Gujarat and collectivization of intermediary labor agents through whom an increase of 40–50 percent in local wages was achieved. Similarly, efforts of the union promoted by Prayas in the brick-kiln sector have led to substantial wage increase for workers. Prayas's work with child migrants had triggered a response both from the sending and receiving State Governments from Rajasthan and Gujarat, through the creation of a special task force and an increased fund allocation for education.