

The Dilemma of the Peasant: Macroeconomic Squeeze and Internal Contradictions in Northern Ghana

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Abstract

The article assesses the emerging dilemmas and contradictions in three villages in Northern Ghana resulting from contemporary changes in the rural landscape. An analysis of the sources of these changes and their manifestations in the sphere of production and exchange is carried out. A combination of qualitative and quantitative data from field studies is used. It is argued that changes in peasant societies have resulted in interwoven multiple social, political and economic problems. Peasants in northern Ghana struggle with the new macroeconomic situation characterised by rising costs of production, tough international competition and limited opportunities for domestic marketing. They also have to deal with social systems which are gradually being altered by the commercialised norms developing in the peasant landscape, thereby generating internal contradictions. These dilemmas are translated into asymmetrical patterns of food in/security for various groups with different income generating activities and levels of influence over resources.

Keywords: Macroeconomic squeeze, internal contradictions, food in/security, Northern Ghana

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Introduction

The world of the peasant has evolved tremendously over the past century in response to processes of change sweeping across the developing world. These processes emanate from liberal economic policies, population growth, climate change and the multiple processes associated with globalisation. Several arguments and interpretations are associated with the effects of these forces of change, with some scholars highlighting negative impacts (Adjei, 1999; Ahmed & Lipton, 1997) while others heralding their positive aspects (Barrett et al., 2001; GSS, 2000; World Bank, 1995).

Some peasants are taking advantage of the incentives and opportunities provided by economic liberalisation, state and NGO interventions, and population induced demand. These are reflected in shifts of crops grown, livestock reared and adoption of non-farm activities or migration (Devereux, 1997; Engberg-Pedersen et al., 1996; Farrington et al., 2002). The picture is neither homogenous within countries, nor the same for different categories of people involved in varied activities. While in southern Ghana cocoa producer prices rose many-fold and the food price index quadrupled in the late 1980s and 1990s resulting from economic liberalisation (Hutchful, 2002; ISSER, 1993; Nyanteng & Dapaah, 1997), the same does not apply to food crop producers because rising prices are both a curse and a blessing to them. Northern food crop producers experienced worse conditions because the markets for rice and cotton are taken over by foreign imports. Also, climatic conditions do not favour the cultivation of most non-traditional exports supported by the new liberalisation regime (Puplampu, 1999; Songsore, 1992; Songsore & Denkabe, 1995).

The structures and processes at the macro and micro levels may tend to influence peasants into making choices and decisions that both constrain and promote well-being. The consequences or outcomes of peasant livelihood strategies, carved within the prevailing socio-economic context, reflect a continuum along a negative-positive curve. Most actions or strategies aimed at enhancing livelihood security also have flip sides resulting in negative consequences in northern Ghana. This constitute the '*dilemma of the peasant*' emanating from a macro-economic squeeze, internal contradictions and environmental stress. The urge to survive

invariably has flip sides on the social, economic and environmental fronts. The hungry peasant is an icon of failure of macro-economic policy, the failure of traditional institutions, and the physical environment and to some extent individual adaptations. Modernisation and structural modifications in peasant economies has imprinted new systems of dependence and interrelations between people, the market, the state and the environment (Deininger et al. 2003; Fairhead and Leach 1998; Hesselberg and Yaro 2006).

Oya (2001) shows how the introduction of neoliberal policies in Senegal stratified the rural population, created landlessness, labour markets and ultimately winners and losers as most large and medium scale farmers benefited at the expense of non-capitalist farmers. Samatar (1993) succinctly demonstrates how neoliberal policies in Somalia successfully attracted foreign investment into the banana industry and increased productivity, but whose ultimate impacts on the local economy was minimal and fraught with the use of child labour. Barrett (1998) argues that liberalisation appears to have engendered both real agricultural growth and heightened food security stress among smallholder food producers. Consequently, several authors argue that these processes are leading to a de-agrarianisation of the peasantry as agriculture is no longer a viable option for making a living (Ahmed & Lipton 1997; Bryceson, 2002; Canagarajah et al. 2001; Habtu 1997; Okai 1995). A crippling agricultural sector is bad news since it is an important determinant of poverty, and hence increases in crop yields have the potential to lift a large number of individuals out of poverty (Elmqvist & Olsson 2007).

Emerging internal contradictions in the spheres of changing social relations such as the undermining of the traditional gendered divisions of labour and responsibilities (Babb 2005; Canagarajah et al. 2001), breakdown in social networks (Lourenco-Lindell 2002) and perversions of land tenure systems (Gyasi 1992; Migot-Adholla et al. 1994; Yaro & Zackariah 2007) constitute new dilemmas for peasants in Sub Saharan Africa.

This article analyzes the production and market dilemmas faced by peasants in three villages in northern Ghana and assesses the implications for food security, which is a major objective and measure of well-being in sustainable livelihood terms. The article seeks to answer the following

questions: How are the livelihood activities of peasants constrained in achieving sustainable livelihoods? How did peasants respond to these constraints? How have these impacted on food security in the villages? The next section presents a framework for conceptualising answers to these questions, followed by the sources and mode of collecting the primary data. The fourth section outlines the socio-economic context of the study area and contextual conditions in the study villages. A discussion of the physical and socio-economic dimensions of the dilemmas is presented, followed by some implications for food security and the conclusion.

A framework for understanding the changing peasant world

The sustainable livelihood approach shows how, in different vulnerability contexts, sustainable livelihoods are achieved through access to a range of livelihood resources which are combined in the pursuit of different livelihood strategies (Baumann 2000; Brock 1999; DFID 2002; Farrington et al. 2002; Gilling et al. 2001; Scoones 1998). Given a particular context of policy settings, politics, history, agroecology and socio-economic conditions, various combinations of livelihood resources result in the ability to follow a defined combination of livelihood strategies. Whether peasants resort to agricultural intensification or extensification, livelihood diversification and migration is mainly determined by the structure imposed by the vulnerability context (Breusers 2001; Brock 1999; Davies 1996; DFID 2002; Ellis 2000; Gilling et al. 2001; Swift & Kate 2001).

The general vulnerability context faced by the individual, household and community defines the opportunities and constraints available. Historical and political factors, current policies, macro-economic conditions, terms of trade, climate, demography, and social differentiation are important aspects of the vulnerability context (Swift & Kate 2001). Colonial and post-colonial economic and political policies are relevant in understanding issues at stake. Droughts and floods in the past might have also caused indelible dents on livelihoods. Current processes such as neoliberal policies and processes of globalisation also play a key role in determining livelihood sustainability, both through their effect on pressures within and upon agriculture, and also through changes in

institutional arrangements that affect sustainability (Ahmed & Lipton 1997; Round & Whalley 2002; Zimmerer 2007).

This is not to deny the role agency plays in obfuscating the intended consequences of structure and contextual forces. Livelihood strategies reflect to large extent, the agency of peasants. The agency of peasants refers to the multiple ways they try to carve niches within the structure imposed by physical, political and socio-cultural conditions. Strategies that conform to the dictates of structure show the weakness of peasant agency in the face of adversity, while those that detract from our expectation of the response to particular structural constraints portray higher levels of agency (Ellis 2000). Understanding how institutions work is best appreciated by looking at the structure-agency debate by structurationists and critical realists. Structures and institutions set the frame for manoeuvrability of social objects. Giddens (1979) defines institutions as rules and resources, recursively implicated in the reproduction of social systems, while structures are the rule-resource sets, implicated in the institutional articulation of social systems. Structure, in a realist sense, suggests a set of internally related elements whose causal powers, when combined, are emergent from those of their constituents (Bhaskar 1979). Whether these powers are exercised is dependent on other conditions, thereby eliminating the idea of a model of regular causation (Bhaskar 1997; Sayer 2000).

Social structures do not exist independently of the activities they govern neither do they exist independently of their agents' conceptions of what they are doing in their activity. Also, they are relatively enduring rather than grounding tendencies in a universal sense (Bhaskar 1979 49). Economic, cultural and environmental structures embodied in social relations define sets of opportunities and constraints people face in their daily lives. Wider trends and intrinsic dissatisfaction by actors eventually alter prevailing structures and create new ones. Studying structures moves us beyond the quantitative and economic understanding of livelihoods, to qualitative aspects that uncover the rules governing social relations and reproduction, social processes, wider constraints and opportunities, and linkages of multi-level institutions. The task of critical realists then becomes one of uncovering structures and processes operating in societies and to understand how individual agents are constrained and empow-

ered (Lawson & Staeheli 1991). Peasants adapt their livelihoods seasonally and over time in response to structural constraints imposed by state policies, climate, and traditional social rules (Chambers & Richards 1986).

Peasant voluntarism or agency is manifest in the manifold reactions to structural constraints and opportunities they encounter. Responses to climatic changes, such as introducing short-maturing varieties of crops and the cultivation of vegetables irrigated from hand-dug wells are strategies used in the Savannah areas (Benjaminsen 2001; Chambers 1994; Channar 1999; Fey 1992). The substitution of animal and crop residues for chemical fertilisers whose prices shot-up with the elimination of subsidies under structural adjustment policies has become a general peasant response (Sahn et al. 1997; Sijm 1993; Songsore 1992, 2001). Probably the most noted peasant response is diversification into non-farm activities (Bryceson 1996; Meagher & Mustapha 1997; Orr & Mwale 2001). Do these actions of peasants really represent independence from structures? Are these reactions simply relocations within the same structures and responses to opportunities created by the same structures? Does this not suggest a dilemma of negative tendencies creating positive avenues for exploitation for some and not for all?

The primary data

The villages from which the primary data for this article was gathered are located in the Kassena-Nankani district (see figure 1 for map). They are Kajelo (Kassem language; open savannah; high population density, one acre of land per person; located in the central part), Chiana (Kassem language; low population density, five acres of land per person; wooded savannah: located in the western part) and Korania (Nankam language: open savannah: medium population density; two and half acres per person; located in the west-central part). The district is located in the savannah vegetation belt with rainfall below 1100mm, has one rainy season, desiccating winds during the dry season, few tree resources, several small streams and a high water table over half of the landscape. A survey was conducted in the year 2002 to collect quantitative information on variables such as livelihood activities, household characteristics, types of shocks and trends affecting individuals, coping and adapting strategies. 200 respondents were chosen from each village on a random basis. Each

village was clustered into four sections from which the random samples were drawn. This was to ensure that spatial variations were covered. The sample was a quarter of households in Kajelo and Korania, but only five percent of Chiana.

Two focus group discussions were held in each village (in August of 2002) to elicit the communities' views on a wide range of issues, including modifications in the rural economy, physical environment, cultural rules and norms. Problems of production and exchange were discussed with both men and women and possible solutions sought. Participants in Kajelo consisted of a group of fifteen farmers I had previously interviewed in 1999. In the other two villages, the local authorities invited twenty people, half of whom were women. The criterion for participation was based on wealth such that all socio-economic groups were represented.

In-depth interviews were conducted in each village with individuals of different economic status to provide life-histories and disaggregated individual level experiences, feelings, expectations and propositions on livelihood issues. Six women and six men were interviewed in each village with ages varying from twenty five to sixty five years old. This distribution is necessary given the importance of women to achieving food security in Africa. All the interviewees were farmers with most of the women also engaged in non-farm activities.

Members of the focus group discussions suggested names of ten poor and ten non-poor households from whom I chose the twelve interviewees for each village. Hence the criteria for poverty are based on the perception of the villagers of indicators such as land size, livestock, income activities and status in village. The data is presented by food security groups calculated from the income variables in the survey. The fragile group is the poorest with total incomes below one dollar per day, followed by the enduring (1-3 dollars) and then the resilient group (above 3 dollars a day).

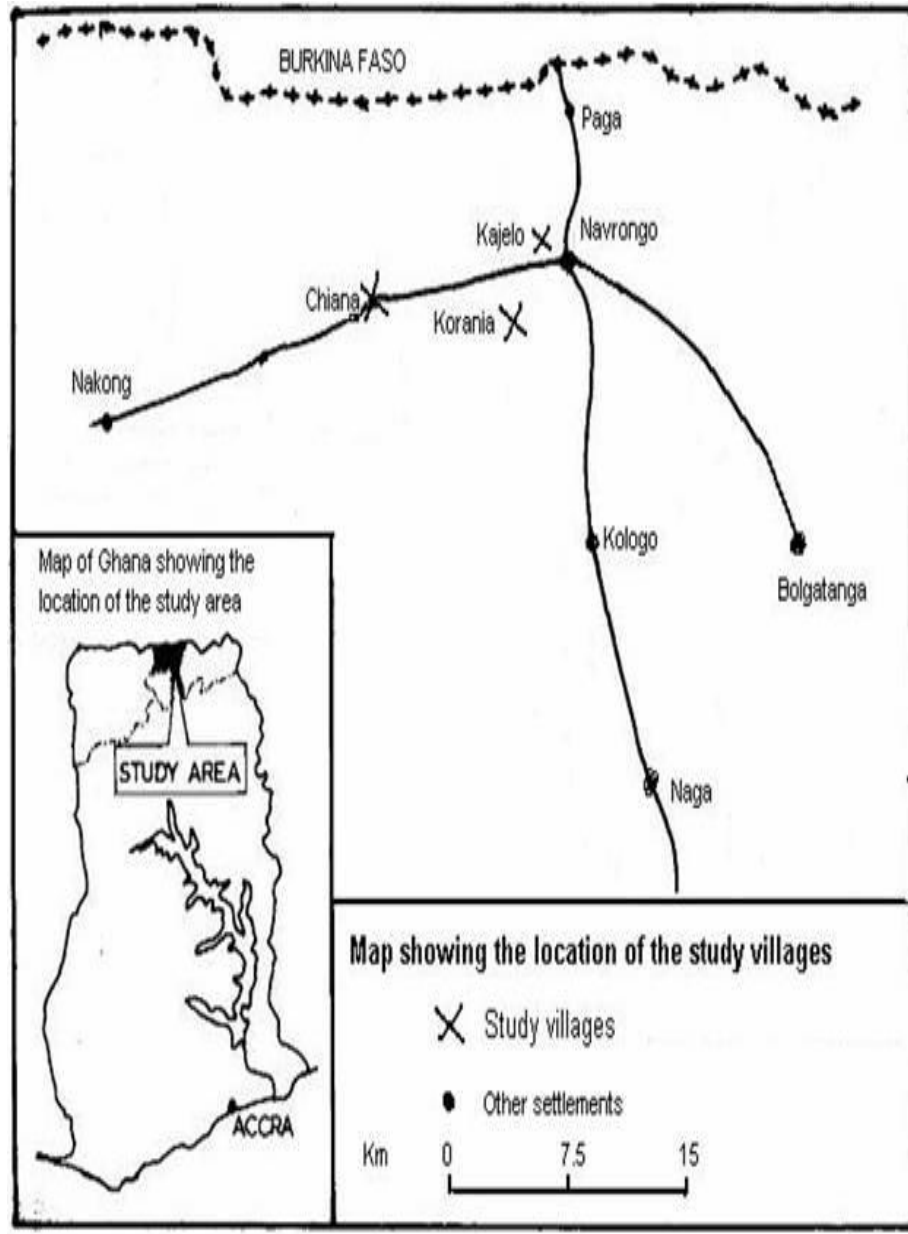


Figure 1 Map showing the study villages

The Socio-economic context of the northern peasant

Colonialism in northern Ghana was an obstacle to the progress of the people as it depleted the area of its labour resources and discouraged commercial cultivation of cereals, cotton and groundnuts which had great potentials. The increasing trend of out-migration is an indication of the poverty of the area whose roots dates back to the colonial era when neglect of its productive potential increased the inequality between it and the South (Nabila 1972). The obvious reason for lack of attention to these problems was the crippling effect cotton growing in the North had on cocoa and mining industries in the south by competing for labour (Dickson 1968). Traditional agriculture remained almost unchanged throughout the colonial period, and in many places declined as a result of the indifference of the administration.

Rapid changes took place in the social and economic spheres of independent Ghana. The potential of the North was reassessed and once again food production for the urban South, cotton, shea nuts, and quarries for the construction industry featured prominently. However the mode of development of these resources in the area was to be discontinuous and subject to the formulations of two ideological views: the socialist and neo-liberal regimes. The socialist Nkrumah government improved the infrastructure of the North in general and brought social services such as hospitals and education to the doorsteps of the ordinary people. In the agricultural sphere, which was stressed as the most important in ensuring progress in the North and elsewhere, a state farm model was developed as the nucleus of innovation. The high level of corruption in input purchase, distribution, usage and management made the state farms unprofitable.

A neo-liberal effort in the immediate post-Nkrumah era also sought to develop the same resources, but this time concentrating on the individual rather than collective organisations. Rice and cotton cultivation were given prominence. A 'green revolution' was unleashed on northern agriculture with the introduction of new improved crop varieties, infusion of capital in the form of credit, strengthening of extension services and the cooperative spirit. However, all these favourable circumstances

benefited only a select few, among were civil servants, military officers and a few rich local farmers.

Of significant importance was the Upper Regional Agricultural Development Project (URADEP) funded by the World Bank. Rural poverty became the focus with the rural identified as an untapped talent, which had been left out of the mainstream of development (McNamara in Chambers 1980, 169). At the same time the Tono Irrigation Project was established to provide for the all-year-round cultivation of improved varieties of crops. Both projects were characterised by bureaucratic and technocratic foundations, which gave little room for participation by the beneficiaries. Secondly, the reality of practices of the projects did not conform to the initial objectives and program activities. The promised move from a traditional subsistence farming system to a commercial cutting-edge technological system for the poorest of the poor was never to be witnessed on any appreciable scale due to corruption and the hijacking of irrigated lands by the rich, traditional authority and some urban elites.

The introduction of the Economic Recovery Program was associated with the Medium Term Agricultural Development Program and its successor the Accelerated Agricultural Growth and Development Strategy. These programs were aimed at export crops. Incentives for increasing staple crop output were lacking and rigidities such as climate and the distribution system continued to be a hindrance. The elimination of subsidies especially on fertilisers and hikes in petroleum prices led to increases in the cost of production for the rural peasants thereby nullifying the incentives provided by the rising prices of agricultural products. Earlier moderate successes in adopting improved varieties of crops were destroyed by the inability of farmers to purchase fertilisers upon which these crops thrive. Inability to survive under northern agriculture led to an intensification of the south-bound migration pattern. These trends resulted in poverty and marginalisation of the northern peasantry and environmental degradation resulting from extensification and over-cultivation of existing lands with little inputs. These production based constraints are exacerbated by the importation of meat and rice from the EU and the USA respectively. Rice cultivation and animal breeding are the major opportunity areas for northern peasants, but competition from

abroad, enabled by globalisation has suppressed these activities to subsistence levels.

Contextual conditions in the villages

Kajelo's particular problem of small land parcels makes the bullock the most optimal farm tool. However, high levels of poverty explain high usage of the rudimentary hoe especially among women who do not own cattle. Several poor families therefore hire the services of bullock/donkey owners who are paid in cash or through labour exchanges. Impoverished soils owing to continuous cropping are a major constraint on crop productivity as most poor do not possess livestock for manure or money to buy expensive chemical fertilisers. Women only use family land as land fragmentation prevents them from venturing into commercial farming. The dry season gardens therefore constitute a major source of income to both gender groups since these require smaller land parcels but unfortunately require higher capital investments. Family gardens are common among spouses while the youth own individual gardens. The poor in Kajelo have vegetables as the main market crop because of the advantage of high water tables enabling dry season gardening. Population pressure and poor access to credit explain the prevailing continuous cultivation regime with little inputs to increase productivity. Livestock is important for meeting contingencies such as food shortages, illness and social expenditures. Generally the major problems faced by Kajelo are that of land fragmentation, patriarchal structures, and inadequate livelihood resources. Strategies evolved in Kajelo in response to these structural constraints are quite specific. Continuous cultivation with the aid of fertilisers and rigorous cultivation practices increases yields per acre. Owning land with different characteristics enable households grow different crops thereby diversifying to achieve better incomes and yields. Dry season gardening enabled by the high water table is a direct response to increasing expenditure and dwindling income from crop cultivation. Not many are able to diversify to irrigation farming due to financial constraints. Women cope by engaging in multiple non-farm activities which are usually funded from livestock sales. The wives of farmers have also become traders thereby reducing the influence of external traders in the villages.

Out-migration is a major livelihood pathway in Kajelo as it makes land available to other family members and ensures remittances during periods of stress.

Korania has conditions similar to Kajelo but has vast lands towards Chiana and also a good share of land in the Tono irrigation project. The dimensions of the dilemmas faced are multiple and so too are livelihood opportunities. The data shows that crops guaranteeing good prices, such as vegetables and rice on the irrigation project, enables farmers to use more modern tools. Of the fifty percent of the sample who own a plot on irrigated land, forty four percent are using the services of tractors. Most of the poor are excluded from irrigation farming so they concentrate on groundnut cultivation as the main commercial crop. The non-poor grow both groundnuts on uplands and vegetables and rice on irrigation fields due to irrigation farming being of low risk compared to the other villages. However, the spiralling cost of hiring tractors and bullocks for land preparation resulting from the removal of fuel subsidies has pushed most peasants back to the traditional hoe, even on irrigated land. Multiple coping strategies are minimal in Korania as many farmers own farms on the irrigation project and in natural valleys. Dealing with low prices of rice is basically through cutting down cost of labour in cultivation and harvesting. A synergistic relationship has evolved in which livestock income is used for large-scale crop cultivation. Also, rice is stored until prices are good and this is enabled by sales of livestock for food. Poor members of the village work as labourers on the irrigation farms for a living. This is beginning to be a popular strategy. As the cost of agricultural inputs rise and people out-migrate, the supply of labour falls thereby raising wages. Dry season vegetable gardening is also taking over rice cultivation as it utilises less water and smaller parcels of land both in and out of the irrigation project areas. The recent drop in demand for tomatoes due to cheaper prices in neighbouring Burkina Faso has led to the collapse of the vegetable gardening sub-sector with a resultant number of recorded suicide cases (individual interviews, in Kajelo and Korania).

Chiana has a typical agrarian economy with vast lands. However, half of its lands are rocky thereby preventing cultivation by tractors. Bull-ock ploughing is higher in Chiana. Extensification allowed by abundance of land opens groundnut farming to all. The rising cost of inputs such as

fertilisers, insecticides and herbicides is the major problem faced by all farmers. Women do not face problems of access to land as in the other two villages. Limitations of inputs and capital in general prevent the useful utilisation of available land, thereby recreating the same scenario of continuous cultivation of compound and second-ring farms. Chiana's dilemmas are rife in the area of exchange as it is far from major markets. Prices quoted at its periodic market are dictated by market women. Rice production went down in favour of maize due to falling demand. Recent gluts in maize production nationwide are having a toll on sustainability of livelihoods and food security. Livestock production is the only sure source of income since non-farm activities are constrained by its agrarian characteristics. Off-farm activities involving shea nut picking and butter processing are on the ascendancy giving better promises for women's livelihoods. Surprisingly, more challenges are experienced by the people of Chiana in dealing with the dilemmas they face. Despite having more environmental resources for crop and animal rearing, they have little room to manoeuvre when things go bad. Apart from changes in crop types and varieties, the farming system has not really adapted tremendously as in Kajelo. Women are the most active adaptors as they take advantage of NGO assistance in growing soybean, learning weaving and trading in a wide variety of food and non-food products. They have not been able to deal with market constraints as the tyranny of distance and a disorganised peasantry impinge negatively against them. Out-migration which is usually associated with land fragmentation is also a major strategy when faced with adversity.

Most of the strategies employed in the villages are therefore a direct reflection of the macro policy conditions and environmental limitations. Market demand precipitates the cultivation of commercial crops, but environmental conditions interact with patriarchal rules and access to institutional credit in determining who can grow and benefit from these commercial crops. Structures have a strong determining role in the decisions of people. Even the position of people in society determine their capabilities and decisions. Out-migration is the single freedom-laden strategy opened to both the frustrated and non-poor looking for better opportunities.

Dilemmas of the peasant in the study area

Peasants face several constraints in their struggles to maintain secure livelihoods that can be subsumed under production or market dilemmas. Gradual changes in the climate of the area in the direction of aridity, rising cost of investments in the absence of 'accessible' credit facilities, increasing household expenditure in the face of dwindling income, the erosion of capital bases of communities constitute some of the forces that have gradually modified conditions influencing the choice of activities within livelihood systems and internal adaptations of livelihood systems (focus groups in all villages: see box 1). The discussion that follows is disaggregated into sections to show the different forces impinging on the peasant landscape.

Climatic conditions

Climate variability constitutes a major constraint to general development of the study areas as many people depend on natural resources that are reliant on weather conditions. Rainfall and the condition of soils are the most problematic. Rainfall is the single most important vulnerability-imposing variable. Variation in rainfall amounts and number of rainy days within the rainy months and year have implications for the economy in the study area. From 1961 to 1997, rainfall amounts for Navrongo² have gone through less variation in the 1960s to higher variations in the 1980s (Ghana Meteorological Services data sheets). Annual rainfall totals have been fluctuating alternatively from 1986 to 1997.

There is a correlation between annual rainfall and the number of rainy days. The years with lower rainfall also registered a lower than average number of rainy days. A total of eighteen out of thirty six years registered lower than expected rainy days. In the 1960s the spacing was wide enough, but consistently decreased in the 1970s until it reached a crisis in the early 1980s when the area experienced the worst shortage of water for plant growth, with 1983 registering the highest deficit of minus sixteen rainy days. The situation has not been that rosy after 1985 as

² Navrongo is the nearest meteorological station to the villages

drought has occurred almost every other year. According to the Ghana Meteorological Services data sheets, the years 1964, 1966, 1970, 1976, 1977, 1989, and 1994 are years in which total rainy days are adequate but yet register negative values for the early months of the rainy season when crops needed moisture. Peasants face a double problem of low and fluctuating rainfall. Strategies for ameliorating the effects of bad distribution of rainy days include the growing of drought resistant varieties of crops, successive planting of the same crop at different times known as staggered planting, and locating crops on different topographies to take advantage of micro-climatic conditions (focus groups, all locations). The limitations of peasant technology in countering the effects of weather vagaries constitute a great source of vulnerability to their livelihoods.

Livelihood Conditions: Rising expenditure, low productivity and cultural constraints

Livelihoods systems can be divided into farm and non-farm systems. In Kajelo and Chiana, ninety one percent of respondents engage in farming while Korania has eighty six percent. But eighty five percent of all 600 respondents engaged in some form of non-farm activities during the dry season. Livelihood systems have undergone shifts in form, purpose and constituents over the years. These shifts are considered as voluntary, necessary or coerced. The farming livelihood system is shown to be the most important, accounting for nearly eighty percent of all income and wealth (survey results 2002). This has serious implications for food security when production and market failures occur. General problems confronting the peasants discussed during the focus group discussions are summarised in Box 1. Farm operations are still dependent on inefficient and simple tools comprising the hoe and cutlass. These instruments are the source of delays in land clearing and weeding that does not enable households make judicious use of the short rainy season, particularly when combined with labour constraints. Hence, only the rich and well-to-do farmers are able to cultivate early enough to make use of the short rainy season whose onset and outset cannot be determined with any accuracy.

Box 1: Threats to livelihoods

Low prices of farm products compared to non-food items. Garden products are not valued correctly because of the activities of market women from outside the district, mainly Kumasi and Accra. These women prefer to drive across the national border into Burkina Faso where the government is aiding the farmers with inputs, loans and dams and wells to purchase the same products at lower costs. This leads to a glut in local markets and subsequently lower prices.

Poor veterinary services resulting from poor funding to livestock sectors. Veterinarians now operate on individual private basis even though they are paid by the state. Drugs and vaccines are very expensive, so many risk it by not vaccinating and depend on luck. This leads to poor quality and reduction in quantities when an epidemic strikes.

Lack of support to small agricultural holders in the form of capital, be it physical or skills, reduces the potential of the farming system to support livelihoods.

High prices of agricultural inputs such as ploughs, fertiliser and seeds are the result of the inflation and removal of subsidies.

The limitations of non-farm activities make life for many poor people precarious. There are no available jobs. Petty trading is the only easy-entry occupation, which unfortunately does not help much.

The inability of people to follow change in the economy and to predict future market, and weather and political variables, make life very uncertain.

Deregulation of services has led to rising costs of health and educational services. Education is now very expensive to fund. The free and compulsory basic education policy announced by the government is not without cost. Even where fees are low, textbooks, sports and cultural fees aggregate into high figures.

High cost of medical treatment reduces incomes and assets. The non-existence of community clinics increases the distance and reduces the motivation to attend modern medical centres in the towns. Medical centres often lack drugs, which must be bought at high prices in the private drug stores. Only the immunization of children is externally funded. An additional and new problem to households is the rising incidence of HIV, which depletes household resources thereby reducing their productivity. The loss of the energetic youth to HIV/AIDS has occurred in a few households. Migration is to blame for the growing incidence of HIV/AIDS in the area.

Source: Focus groups, 2002

The non-substitutability between labour and capital owing primarily to poverty and high input prices of inputs such as herbicides,³ tractors, bull-ock ploughs and harvesting technologies limit the scale of production, or increases the cost of production that reduces the competitiveness of the farmers.

In today's globalised world where neoliberal paradigms reign, it is imperative for farmers to access credit in order to partake in the opportunities offered by the global division of labour or else their roles would be taken over by farmers far away responding to a global demand created by the inabilities and non-competitiveness of the local farmers.

Lack of access to traditional banks due to problems with the assessment criteria for collateral, the limited scope of NGO credit schemes and the exploitative nature of traditional commercial lenders, constitute a major bottleneck to improvements in livelihoods (interview with GNADO, a local NGO). A total of 463 out of 589 farmers surveyed did not borrow any money in 2001 (see Table 1). The majority of borrowers had family and friends as major sources of credit. Qualitative interviews (in all villages) indicate that such loans are usually meant for contingencies such as ill health rather than for enhancing production. In effect only twenty three people benefited from production-oriented credit facilities.

Lack of credit obviously explains lack of adoption of superior technology so crucial to the intensification drive needed in a densely populated region and also to survive in a globalized world awashed with cheap food imports and aid. Survival in the remotest of villages in Ghana is no longer dependent on subsistence. Integration into the market logic has been spurred by the need to pay for health, education, and transportation in addition to inputs for production and personal needs in order to look culturally acceptable. This has effectively led to selective crop commercialisation (see Table 2) geared towards generating income to meet the numerous expenditures and calls on entitlements. Depending on input requirements, land size and labour, different wealth groups choose specific crops for the market. Commercial crops receive more attention than subsistence crops thereby having negative consequences for food

³ which reduce the frequency of weeding

security of those unable to realise higher crop yields and whose non-farm income is low.

Peasants adapt the farming practices in response to macro-economic, environmental and social shocks. These shocks include increasing input prices due to removal of subsidies, falling soil fertility, increasing cost of public services, increasing scarcity of environmental goods for off-farm income generation among others (collated from the different focus group discussions). Peasants respond by reducing expenditure, such as reducing fertiliser application, restricting fertilisation to specific crops and land types, single weeding regimes, burying grass and other residue for compost manure, using fire for clearing land, using family labour as a substitute for machinery, early harvesting before crops reach maturity in order to break the hunger season, and forming alliances with other farmers to help in cyclical labour distribution (focus groups: all sites).

TABLE 1: Sources of finance in the study area 2001

Village	Food security group (Percentages)				
	Source of finance	Fragile hhs	Resilient hhs	Enduring hhs	Total
Kajelo	None	90,4	92,5	72,9	86,9
	family relation	1,2	1,5	18,8	5,6
	friend	4,8	1,5	4,2	3,5
	NGO			2,1	0,5
	bank/goverment	3,6	4,5	2,1	3,5
	Total	100,0	100,0	100,0	100,0
Chiana	None	76,3	85,4	80,0	81,1
	family relation	10,2	6,1	7,3	7,7
	friend	10,2	4,9	9,1	7,7
	bank/goverment	1,7	2,4	3,6	2,6
	Church	1,7			0,5
	Employer		1,2		0,5
Total					
Korania	None	81,0	67,9	56,6	67,7
	family relation	14,3	19,6	19,7	17,9
	friend	1,6	10,7	9,2	7,2
	NGO			3,9	1,5
	bank/goverment	3,2	1,8	10,5	5,6
	Total	100,0	100,0	100,0	100,0

Source: Livelihood survey 2002

TABLE 2: Crops grown for the market

Village	Market crops	Food security group (Percentages)			Total
		Fragile hhs	Resilient hhs	Enduring hhs	
Kajelo	None	44,6	29,4	18,8	33,2
	Maize		1,5		0,5
	Groundnut	14,5	36,8	39,6	28,1
	Potatoes	2,4	2,9		2,0
	Vegetables	34,9	25,0	31,3	30,7
	Rice		1,5	10,4	3,0
	Soya beans	2,4	2,9		2,0
	Mango	1,2			0,5
	Total	100,0	100,0	100,0	100,0
	Chiana	None	47,5	25,6	12,7
millet		1,7		1,8	1,0
Sorghum			2,3		1,0
Maize		8,5		5,5	4,0
Groundnut		42,4	70,9	74,5	63,5
Vegetables				1,8	0,5
Rice			1,2	1,8	1,0
Soya beans				1,8	0,5
Total		100,0	100,0	100,0	100,0
Korania	None	41,3	25,9	19,0	28,0
	Maize	1,6	3,4	1,3	2,0
	Groundnut	30,2	27,6	43,0	34,5
	Vegetables	11,1	15,5	7,6	11,0
	Rice	11,1	27,6	27,8	22,5
	Soya beans	4,8			1,5
	Tomatoes			1,3	0,5
	Total	100,0	100,0	100,0	100,0

Source: Livelihood survey 2002

There is a move away from crops demanding more fertilisers, such as some varieties of millet and maize, to those capable of providing an average yield under existing circumstances. However, most of the non-poor peasants continue cultivating crops demanding high fertiliser inputs in addition to alternatives that the poor adopt (about eighty five percent of them). About forty five percent of the ultra-poor cultivate traditional subsistence crops for their own use and avoid the risks involved in trying new crops, which they do not have the capital to cultivate.

Newly introduced crops, such as cowpeas, soybean and other vegetables, in addition to traditional crops for which demand has increased are the targets of most peasants. The ability to move between crops is constrained by resource endowment and savings. Farmers with some savings and investments in the form of livestock easily move between crops, thereby taking advantage of high outputs and prices, and are thus becoming wealthier. A double contradiction emerges in the field of crop cultivation, as strategies are geared both at increasing income and reducing expenditure. Peasants diversify to commercial crops in order to earn more income, but at the same time do not apply the necessary inputs to ensure higher productivity that is needed for profitability. This is the trap in which many find themselves and are not sure whether farming is still the way forward.

Labour relations have been transforming fast since it is inconceivable to 'throw labour parties'⁴ on farm operations for which they all know are geared towards earning money, rather than traditional subsistence to which people might give a free helping hand. Among the poor the strategy is to assist each other in turns since they cannot afford the daily wage (individual interviews in all villages). But they do still employ young men/boys during periods when 'weeds are swallowing crops' for which they sell assets to pay. During those times cyclical labour systems easily collapse because of the urgency on all farms, and the difficulty of choosing whose farm to tackle first. The non-poor, on the other hand, either have money to hire extra farm hands from the poor group or freelance young men who find it more rewarding to earn wages rather than culti-

⁴ A system of reciprocal labour exchanges whereby a member of the community invites people to his farm and provides food and drink. In turn he also reciprocates when invited by others.

vate in a risky environment. They also have backups of labour supply which they accumulate during the ploughing period when they perform ploughing operations for the input-poor, provide seeds and even food items to the food-insecure households against pledges of labour for their weeding and harvesting operations.

Rich landlords, who give out land, equipment, and financial aid to the poor in return for their labour power during weeding and harvesting, actually deprive these people from using the assets that have been granted them. Payment of loans owed to patrons involves the depletion of productive capital, which could have altered the poverty situation of the poor. This dilemma of social capital characterises patriarchal relationships in the study villages. Not having a patron to provide assistance means having no recovery mechanism powerful enough to enhance resilience. However, having a patron also involves having to sacrifice time, energy and resources in maintaining the relationship. There is therefore an important link between social capital and political capital here as patrons serve as the strong forces for the poor clients to lean on, while the patrons use the support of the clients to get stronger in the face of other contenders. The emerging inequalities arising from changing social relations and institutions are creating new contours for farm relations among different socio-economic households.

The effects of negative cultural tendencies are evident in the relations between patrons and clients, be they in-family or among different wealth groups. The land tenure system reflects cultural elements that limit productive investments since lands are family owned. People in need of land have to borrow from landlords with excess lands, acquiring limited and unfavourable rights (focus groups in Kajelo). Though land is scarce in Kajelo and Korania, household sizes are just as big as in Chiana, averaging six per household. This dependency burden seems to be taken care of by migration. Due to migration there is no demographic response in reducing family sizes to reflect constraints of land pressure. Reverence for the elderly is still very strong, and they, particularly the illiterate among them, continue to reject beneficial innovations which conflict with their ancestral practices. However, years of extension activities has paid off in terms of inculcating high yielding agricultural practices into mainstream

peasant farming. The relapse to obsolete practices is blamed on poverty by most farmers rather than ignorance or tradition. These are the internal contradictions that reflect in the social, economic and political sphere of village life.

Market dilemmas, livelihood changes and emerging vulnerabilities

The contemporary functioning of the market in terms of the prices being offered for peasant products such as crafts, groundnuts, cereals, vegetables and assets such as livestock determines the income side of the equation of peasants. Exchange relations in the markets in Navrongo and Chiana have always been in favour of market women for most of the year, leaving only a short period during which peasants can make substantial profits on their products (focus group discussions in Chiana). Unfortunately not all peasants can make that profit since they cannot afford to wait for a long time after the harvest to sell farm output because of the need to meet recurrent expenditure. Only well-off peasants can, therefore, make use of seasonal price shifts.

Cheap substitutes of crops grown in the area imported from countries using green revolution technologies mean that exchange relations in rural markets will always be to the disadvantage of the peasant. Why buy 'local brown broken rice' when 'white long grain rice' is imported at a price a little above that of local rice? Groundnut is the only crop with a constant good price. Cheap imported meat and cereals are said to destroy market conditions for the northern peasant. A local hen weighing one kilo cost 40,000 cedis (4.2\$US) while the imported chicken cost half of that (2007 periodic market prices at Navrongo). Prices of goats are the exception since not much goat meat is imported. The north used to produce most of the beef consumed in the country. It is doubtful if this picture is half-true today. Poor veterinary services and high cost of vaccines and medicines for animal husbandry necessitated by structural adjustment policies are partly to blame for poor local production of livestock especially cattle.

The increasing concentration by peasants on commercially oriented crops has created a new form of vulnerability for the peasant household in the form of exchange entitlement crisis when the consumer price index

for food rises or falls. Commercial crops are sold and the money used to purchase other crops such as millet and maize meant for household consumption. Market integration is not bad, but takes away the advantages of subsistence agriculture, while imposing a new form of risk on peasant livelihoods. This is the market dilemma of the peasant in the current socio-economic structure. High prices of agricultural products are both good and bad for peasants since they need cash for other calls on entitlements and still need to buy food for sustenance.

Markets are therefore critical to the ability of peasants to satisfy their food requirements, both through their impact on prices of farm produce and other natural resources the poor have to sell, and the prices of food-stuff that the poor need to live on. Almost all peasants in the study villages purchased inputs, food and other necessities from the market. The implication of this trend is that peasants are affected by the rising consumer price index for both food and non-food items. The rising consumer price of food is helpful to neither farmers nor non-farmers, because the rate of inflation directing the index affects every commodity and service that peasants need to buy.

Commercialisation of certain agricultural crops is a good case in point. The rise in values for crops such as groundnuts, red sorghum, rice and tomatoes saw a concomitant rise in production efforts by peasants, with peasants in Chiana concentrating on groundnuts, those in Korania on rice and many in Kajelo on tomato and chillies. But due to production problems, peasants are not able to produce all their subsistence crops in addition to these commercial crops, but have to acquire them from the market. Since most traditional crops with low yielding capacities, such as millet, are purchased from the market at comparatively high prices, the risk that households producing insignificant amounts of commercial crops due to land and capital constraints will not be able to meet their food needs, is a reality. The substitute to millet, which is maize, sells at comparatively cheaper prices due to high yielding attributes of new varieties, but does not bring spin-off effects to the local economy since it is mostly imported. In micro economic terms, the district experiences a balance of payments deficit when own production of subsistence crops is low, since both food and non-food products have to be imported using

income from only groundnuts, rice, tomatoes and livestock from the farm sector, and shea nuts and shea butter from the non-farm sector.

Specialisation in commercial crops is more rewarding for the non-poor groups who own enough land, are able to store their output until prices are high, and have other self-provisioning crops that last for a longer time. The poorer peasants still engage in multiple crop cultivation as an insurance strategy against crop failures. This practice is not beneficial since they need cash in any case to meet other idiosyncratic events that befall the poor more frequently than the non-poor due to the cycle of causation between poverty, nutrition, disease and other accidents. The new non-farm economy is based on the exchange economy, but due to multiple social, economic and cultural reasons the benefits have been of limited range. Social relations are on a decline due to the profit-orientedness of the non-farm sector.

Traditional misinterpretation of profit as greed leads to unsustainable small businesses that spring-up and collapse under the weight of generosity. Many women complained of not being able to borrow because relations do not pay back loans by arguing that 'whatever belongs to your son or daughter or whatever belongs to the family as a whole'. Hence, the moral justification for paying back is provided by tradition which unfortunately does not comply with capitalist notions of individual accumulation. A second illustration is the case in which a wealthy person cannot look on while a poorer relative suffers from illness or any emergency. There is normally a trail of depletion of assets by this wealthy family member to save the rest until all become poor. Though this is the norm in Kassena society, there were observed aberrations reported during focus group discussions (Male participant in Kajelo) captured by the statement 'these days everyone for himself and God for us all' meaning that dependence on others using tradition as yardstick is on the decline and individualism is gaining currency thereby eroding social capital. Education is an important variable in the success of exchange economy, but the area has a high illiteracy rate with more uneducated women than men. More training programmes by NGOs and the state will be needed to improve the understanding of peasants of market conditions and also impact some skills needed in both farm and non-farm economies.

Implications for food security

The research findings corroborates Sen's (1981) thesis that food availability alone does not necessarily lead to food security. Rather, the range of possibilities for earning income or producing food for own consumption, which he terms the entitlements enshrined in institutions, defines the food security status of individuals. The nature and extent of food insecurity in the study villages is a reflection of poverty trends in the district and the nation as a whole, caused by physical, economic, social and political forces that define the space of vulnerability within which livelihoods are contrived.

Since agriculture is the most important income source of livelihoods for many households, I now look at the contribution of own food production to food security⁵ in the three villages (Table 3). Half of all households in each village could not produce enough food for all year round consumption. This leads us to the importance of markets in the acquisition of food, which necessitates the sale of assets and non-agricultural activities for income. Kajelo shows a less unequal distribution than Korania where inequalities are greatest between the food secure and food insecure. Chiana has a better record, as the numbers of households recording crop harvest adequate for only three months of consumption are the lowest, with most households having supplies that exceed half a year's consumption. Large landholdings in Chiana, including the possibility for cultivation on virgin lands explain the good crop outputs. Since most respondents did concentrate on the cultivation of specific commercial crops they will have to exchange these commercial crops for cereals.

Exchange entitlements become important for peasants engaged in food production. Own crop production is not an adequate indicator of household food security and well-being in the area even though it maps out the major possible scenario. The level of diversification, asset levels (especially livestock: see table 4), income from commercial crops and remittances redefine this variable. Asset buffers are the most widely written

⁵ Own food production alone is not a good measure of household food security since they engage in non-farm activities and may also receive remittances. However, we are interested in showing the role of agriculture alone in household food security.

about strategy of the peasant (Rahmato 1991; Reyes 1992; Sigurd 1996; Pretty 1997; Swift and Kate 2001; Yohe and Tol 2002) in which assets are regarded as savings during normal periods of economic growth for use during periods of economic decline or stress. Assets form the main source of back-up for the livelihoods of peasants as they fall on these assets in times of crisis by exchanging or cashing them (Hesselberg 1993). Livestock is always the first to get to the market when a crisis strikes. Household items always come last as they form a major source of pride and also, because they have less values when used.

However, the sequence pursued in converting assets into consumption is not uni-directional, and could be of any form, depending on the cause of the crisis, economic condition and socio-cultural condition of the time, and the characteristics of the household. The logical sequence conceptualised by the literature is seen slightly in Korania where poultry and goats were initial market candidates, sheep the second and cattle the third, showing a progressive sale of more valuable livestock as a crisis deepens. In Chiana and Kajelo a mixed picture emerged whereby as much as 9% of households in Chiana sold cattle first, while in Kajelo no cattle were sold. Other assets apart from livestock are indiscriminately sold according to the idiosyncrasies of the owners, but obviously out of lack of surplus livestock.

Food crop producers, who are in the majority, face the dilemma of losing or gaining when output is low or high depending on a range of contingently related factors. In favourable years, increases in food supply may directly lead to a reduction of entitlements for some groups through to a decline in exchange entitlements owing to changes in the terms of trade. However this reduction in entitlements might not be serious considering that on average over 60% of household incomes in Ghana is spent on food (GSS 2000). High price seasons are taken advantage of only by those capable of storing output beyond the low price season. Low output guarantees high prices for the few lucky ones, but hardships for many with small parcels of land characterised by little use of inputs. It also means low exchange entitlements for non-farming households who have to purchase food at high prices.

TABLE 3: Contribution of own production to household food security.

Village		Food security group					
How long does the stored food last		Fragile hhs	Resilient hhs	uring	Total		
Kajelo	All year	Count	6,0	6,0	7,0	19,0	
		%	7,5	8,7	14,6	9,6	
	¾	Count	14,0	27,0	14,0	55,0	
		%	17,5	39,1	29,2	27,9	
	½	Count	21,0	17,0	5,0	43,0	
		%	26,3	24,6	10,4	21,8	
	¼	Count	39,0	19,0	22,0	80,0	
		%	48,8	27,5	45,8	40,6	
	Total	Count	80,0	69,0	48,0	197,0	
		%	100,0	100,0	100,0	100,0	
	Chiana	All year	Count	7,0	7,0	6,0	20,0
			%	12,1	8,1	10,9	10,1
¾		Count	8,0	13,0	10,0	31,0	
		%	13,8	15,1	18,2	15,6	
½		Count	16,0	51,0	30,0	97,0	
		%	27,6	59,3	54,5	48,7	
¼		Count	27,0	15,0	9,0	51,0	
		%	46,6	17,4	16,4	25,6	
Total		Count	58,0	86,0	55,0	199,0	
		%	100,0	100,0	100,0	100,0	
Korania		All year	Count	5,0	4,0	18,0	27,0
			%	7,9	6,9	23,1	13,6
	¾	Count	7,0	5,0	10,0	22,0	
		%	11,1	8,6	12,8	11,1	
	½	Count	15,0	11,0	18,0	44,0	
		%	23,8	19,0	23,1	22,1	
	¼	Count	36,0	38,0	32,0	106,0	
		%	57,1	65,5	41,0	53,3	
	Total	Count	63,0	58,0	78,0	199,0	
		%	100,0	100,0	100,0	100,0	

Source: Livelihood survey 2002

TABLE 4 : *Asset sales as strategy to combat food insecurity*

Village		Food security group (Percentages)			
Asset sold to buy food in hun		Fragile hhs	Resilient hhs	Enduring hhs	Total
Kajelo	None	32	44,9	25,0	34,7
	goat	40	37,7	47,9	41,2
	sheep	12	4,3	20,8	11,6
	bicycle	1		4,2	1,5
	Sewing machine		1,4		0,5
	Furniture	1			0,5
	poultry	13	11,6	2,1	10,1
	Total	100	100,0	100,0	100,0
Chiana	None	12	9,3	3,6	8,5
	goat	41	51,2	70,9	53,5
	sheep	10	10,5	5,5	9,0
	Clothing		2,3		1,0
	poultry	25	17,4	10,9	18,0
	Cattle	10	8,1	9,1	9,0
	Baskets	2			0,5
	Stools		1,2		0,5
Total	100	100,0	100,0	100,0	
Korania	None	71	56,9	61,0	63,1
	goat	11	12,1	13,0	12,1
	sheep			1,3	0,5
	bicycle	6	22,4	10,4	12,6
	poultry	11	8,6	14,3	11,6
	Total	100	100,0	100,0	100,0

Source: Livelihood survey 2002

This confirms Fine's (1997) assessment that the very same processes that are intended to provide the underlying determinants of entitlements at the household or other levels may themselves undermine the solidity of these forms of access to food. High supply of food crops, due to good weather and other conditions, definitely leads to low prices, at least in the short-run, and this often harms poor farmers who cannot afford to store their produce. However, in terms of self-provisioning at the household level, the nutritional status of individuals is guaranteed. Meeting idiosyncratic threats become problematic since large portions of farm produce has to be sold out – the effects of the resultant poor terms of trade.

Conclusion

The historical and contemporary structures and processes at the macro and micro level tend to lock peasants into making choices and decisions that both limit and promote well-being. The policies of the state, especially structural adjustment, imposes several problems and opportunities on peasants in terms of their ability to engage in profitable activities. This study has shown how agency interacts with structure to carve out livelihood outcomes. People continually adapt to the processes at both macro and micro levels. Unfortunately, due to rising cost of inputs and falling demand for some agricultural products, the response of peasants has been negative for the environment.

Dilemmas faced by peasants do not necessarily always result in negative livelihood outcomes. Most of the poverty experienced in the study villages is due to the failure of macro-economic policy, of traditional institutions, of the physical environment and, to some extent, of individual adaptations. Modernisation and structural changes has imprinted new systems of dependence and interrelations between people, the market, the state and the environment that generate different outcomes for livelihoods. It is important for researchers to focus on unravelling the dilemmas different people in different environments and under different socio-economic conditions face and, how structures are evolving in response to the agency of poor people trying to get out of poverty.

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