

**The Peri-Urban Interface:
a Tale of Two Cities**

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6 The livelihood strategies of poor households in the peri-urban interfaces of Hubli-Dharwad and Kumasi

Poverty and the peri-urban interface

There has been little explicit work to date on the impact of peri-urban processes on household livelihood strategies. DFID's NRSP commissioned a study on poverty and the peri-urban interface (Rakodi, 1999) to guide research in poverty-focused peri-urban natural resource management. The conclusions arising from the study were as follows:

- There is very little available information that looks specifically at poverty in peri-urban areas.
- A process of increased differentiation or polarisation between capitalist and subsistence producers is often referred to in peri-urban areas.
- Those who cannot take advantage of the opportunities presented by urban markets include the already land poor, those who have insufficient capital to purchase land and/or intensify production, and those who are excluded from credit and extension systems. Often, women find it more difficult than men to access all these resources.
- Urban pressures on common pool resources such as forests, rivers and wetlands, may lead to environmental degradation and reduced access by the poor to products they were previously able to gather.
- Residents in villages within the zone of peri-urban influence are presented with alternative economic opportunities in the expanding urban economy. This might result from agricultural intensification, demand for raw materials, wage employment in urban enterprises or opportunities for self-employment.
- There is very little information available on processes of social change in peri-urban villages.
- There is likely to be increasing competition for resources (such as water, building materials, energy) between local communities within the peri-urban

area and the city. Analyses of the relative access to infrastructure of rich and poor households are scarce.

Building on these conclusions, Rakodi (1999, p.58) puts forward a number of hypotheses:

In the early stages of urban influence and/or the outer parts of the peri-urban interface the opportunities for farm enterprises exceed the threats. Those who benefit tend to be the larger farmers, while those who are least able to take advantage of the opportunities are smaller farmers who lack capital and surplus land, leading to increased differentiation. Increasing access by small farmers to capital and other farm inputs would enable them to increase productivity and benefit from increased sale of surplus produce.

In the later stages of urban influence on the urban fringe areas or the outskirts of the built up area, the threats to farm enterprises outweigh the opportunities, leading to increasing abandonment of farming. Those who benefit from this process are those who can either sell land to speculators or developers or have the capacity to develop it. Those who lose tend to have little or no land, are dependent on wage or casual labour in other farms for all or part of their incomes, and are unable to take advantage of alternative economic opportunities in the urban labour market, because households and their members lack labour power, skills, contacts, capital, or freedom of movement. Those who have insecure rights to land, or who have little to sell, and who are excluded from urban labour market opportunities may be impoverished and, in any case, differentiation is likely to increase. Women are likely to be disproportionately affected.

Farmland may be converted from subsistence food production to either commercial production for the urban market or urban development. If the food producers are unable to access alternative income generating activities, households will suffer from increased food insecurity, which will be associated with increased malnutrition and poorer health status.

Those seeking new economic opportunities are likely to face barriers to entry erected by those already pursuing particular income generating activities. As a result, those who are forced to abandon cultivation and related activities on their own land will become more reliant on casual work or the less lucrative informal sector trading and service occupations, and unemployment rates will increase.

These hypotheses could be used to feed into future research projects. The focus should, however, be on how natural resource-related peri-urban processes impact upon poor households, who may reside in city centres as much as in villages on the outskirts of Any work that aims to improve the livelihoods of poor people through sustainably enhanced production and productivity or renewable natural resource systems must have a good understanding of the livelihood strategies of poor households. Knowing who the poor are and how poor households respond to changes in natural resource production systems resulting from urban development is critical to the design of effectively targeted research and development activities.

The sustainable livelihoods framework

The concept of livelihood strategies builds on the now widely accepted broad interpretation of poverty. That is, that poverty is viewed as including a lack of basic needs, income/consumption, assets (material and non-material), dignity/autonomy, social inclusion, equality (gender and ethnicity) and political freedom/security (Carney, 1999). Broad interpretations of poverty facilitate analysis of the many causes and manifestations of poverty, leading to more creative and effective solutions.

A widely accepted definition of a livelihood provided by Chambers and Conway is given in Carney (1999, p.4), as:

a livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.

Singh and Gilman (1999, p.540) suggest that “livelihood systems consist of a complex and diverse set of economic, social, and physical strategies. These are realised through the activities, assets and entitlements by which individuals make a living”. Building on the understanding of livelihood systems and strategies, Chambers and Conway, and Singh and Gilman go on to define what is understood by *sustainable livelihoods*. Singh and Gilman (1999, p.540) define sustainable livelihoods as those “derived from people’s capacities to exercise choice, access opportunities and resources, and use them in ways that do not foreclose options for others to make their living, either now, or in the future”. The definition of sustainable livelihoods has led to the development of approaches to analyse

livelihood strategies and to develop ways forward to enable them to become more sustainable.

A sustainable livelihood framework has been developed by DFID in order to improve development activity through systematic – but manageable – analysis of poverty and its causes; taking a wider and better informed view of the opportunities for development activity, their impact and ‘fit’ with livelihood priorities; and placing people and the priorities they define firmly at the centre of analysis and objective-setting (Ashley and Carney, 1999, p.6). The approach has been defined by Ashley and Carney (1999) as a way of thinking about the objectives, scope and priorities for development, in order to enhance progress in poverty elimination.

Using the sustainable livelihoods framework enables a more holistic approach to be taken to development activity, recognising that people have a range of strategies on which they base their livelihoods. The framework is shown in Figure 6.1 and can be used as an analytical tool, or checklist, to identify issues that should be explored. A core feature of the framework is an analysis of the five different types of assets upon which individuals draw to build their livelihoods. These are natural, social, human, physical and financial capitals, described by Carney (1998b).

Part of the sustainable livelihoods’ framework involves the analysis of *coping* and *adaptive* strategies. Coping strategies have been defined as “often a short-term response to a specific shock such as drought”, and adaptive strategies as “a long-term change in behaviour patterns as a result of a shock or stress” (Singh and Gilman, 1999, p.541). Adaptive strategies may be most relevant to understanding a peri-urban setting, as people and households change their strategies to make the most of, or to cope with, changes brought about by urban development.

Sustainable livelihoods and natural resources

The use of livelihoods as an analytical framework reflects recognition that “nowadays farming on its own rarely provides a sufficient means of survival in rural areas of low income countries” (Ellis, 1998, p.53). Ellis refers to *livelihood diversification*, involving wage work in agricultural and non-agricultural activities, non-farm self-employment (e.g. trading) and remittances from urban areas and from abroad. Whilst Ellis is referring to the sustainable *rural* livelihoods framework, livelihood diversification remains a relevant concept in other locations. In peri-urban and urban areas, for example, households may let their

rural land to others or obtain agricultural produce from land owned by the family in rural areas. Diversification of livelihoods can be both positive and negative: positive if diversification makes livelihoods more secure and reduces adverse impacts of seasonality, but negative if diversification results in lower agricultural productivity, for example. Ellis suggests that adopting a livelihood diversification perspective provides a framework for natural resource policies. This is because NR policy is fundamentally about improving the productivity of resources in agriculture, including livestock. But it is also about people's interactions with off-farm environmental resources for livelihood purposes, and it seeks to secure sustainable natural resource use in this respect (Ellis, 1998, p.62).

Ellis (1998, p.62) goes on to suggest that whilst livelihoods may be diverse, in rural areas, reliance on agriculture as the main source of income or food remains. He does suggest, however, that the "past neglect of livelihood considerations has sometimes resulted in natural resource policies and projects that have been insensitive to local priorities, mistaken in their assumptions about the availability of time and misdirected towards the better-off in rural communities rather than the rural poor". This is particularly true in peri-urban areas, where many other income-earning opportunities, such as urban casual labour (construction work or selling fruit and vegetables, for example) exist. These opportunities may provide poor farmers or landless labourers with more attractive work than agricultural activities.

Livelihood strategies in the peri-urban interface

The framework was initially designed to generate more understanding of rural households, but is now seen as a generic framework, for use in urban as well as rural areas (Singh and Gilman, 1999).¹ There are limited examples of its use in a peri-urban setting. Tacoli (1998) examines rural-urban interactions and the sustainable rural livelihoods framework, noting that the livelihoods of households in any location often include both rural and urban elements. She suggests that rural-urban interactions can be divided into two categories: linkages across space (such as flows of people, goods, money, information and wastes) and 'sectoral interactions'. Sectoral interactions include 'rural' activities taking place in urban areas (such as urban agriculture) or activities classified as 'urban' (such as manufacturing and services) taking place in rural areas (Tacoli, 1998, p.67).

In a later paper, Tacoli (1999) reviews the contribution of a number of livelihood frameworks to understanding the opportunities and constraints for low-income groups. She suggests that "understanding transforming structures is especially important in the PUI, where institutional fragmentation and rapid

change in the roles, responsibilities, rights and relations between different groups and organisations can result in growing social polarisation" (ibid, p.3). She also confirms the belief that "in the PUI, income diversification is likely to be intensified as the proximity of urban and rural labour markets can provide increased employment opportunities" (ibid, p.6).

Using the sustainable livelihoods' framework in a peri-urban context raises a number of specific questions, particularly regarding who and where are the households affected by peri-urban processes? The peri-urban interface has been characterised as intense flows of goods, people and produce between rural and urban areas, and people affected by such interactions could be located in urban centres or in rural areas as well as in urban peripheries. This makes the identification of beneficiaries more complex.

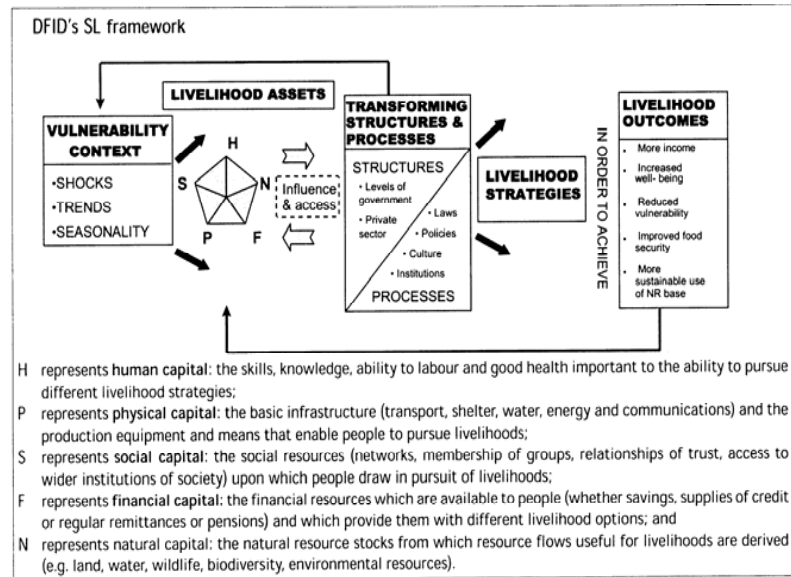
Whose livelihood strategies?

There is, therefore, a dilemma posed by the peri-urban interface regarding who and where are the potential beneficiaries of the peri-urban interface research programme. There is also the question of household or individual livelihood strategies. Although there is a significant literature stressing *intra-household* dynamics, it is widely accepted that households should be used as the unit of analysis within the sustainable livelihoods framework. The United Nations Framework for the Inter-Agency Task Force (IATF) on Employment and Sustainable Livelihoods, for example, uses households as the socio-economic/ecological unit (Singh and Gilman, 1999, p.543).

The sustainable livelihoods' framework has also been used to undertake a 'livelihood analysis' of poor people and different poor groups (Ashley and Carney, 1999). Carney (1998b, p.8) suggests that "the overall analysis of capital assets is most likely to be conducted for different social groups".

Preston (1994, p.203) argues that "a household focus permits a better understanding of how and why people organize their activities". Building on this, he argues that the concept of household livelihood strategies provides "a clearer view of both collective and individual processes of decision-making within domestic units". Preston uses the definition of households as "those living and eating together", which excludes family members who live elsewhere.

Source: Adapted from Carney (1999a)



There are, therefore, a number of units of analysis that could be considered: individuals, households, families and different groups of poor people (e.g. women, elderly, landless labourers).

Using the sustainable livelihoods framework in the peri-urban interface

From this brief review of work on poverty in peri-urban areas, and of the use of the sustainable livelihoods' framework, the following conclusions can be made:

- The poor are more likely to be casual workers, and may move from working in agricultural work to more urban based work, such as construction, road building, selling fruit and vegetables. There may, however, be more opportunities for more casual agricultural work if agricultural intensification takes place. Such opportunities would be balanced by increasing mechanisation.
- Women may have greater opportunities for undertaking paid agricultural work, as more men take up urban employment. Wages may, however, remain

low. Although there may be benefits in terms of increasing household income with women taking on more paid employment, there may also be adverse impacts on their work burden, child care and health.

- People respond differently to opportunities and threats posed by urbanisation. This could result in increasing polarisation between income groups.
- Diversifying income sources away from agriculture could lead to a decrease in agricultural productivity, which could have a long-term impact on the food security of poor households.

Before setting out the questions asked of the research undertaken to date in Hubli-Dharwad and Kumasi, it is useful to note other sources of guidance for undertaking livelihood analysis. Carney (1999, p.8), for example, suggests that in planning development activities, the use of the sustainable livelihoods' framework entails analysis of the context in which (different groups of) people live, including the effects upon them of external trends (economic, technological, population growth, etc.), shocks (whether natural or manmade) and seasonality. People's access to different types of assets (physical, human, financial, natural and social) and their ability to put these to productive use. The institutions, policies and organisations which shape their livelihoods. And, finally, the different strategies that they adopt in pursuit of their goals.

In reviewing the work undertaken by the NRSP's PUI research to date, it should be remembered that only since the development of the revised logical framework (December 1998) has a strong and explicit poverty focus been present. Although information has been generated on livelihood strategies in Hubli-Dharwad and Kumasi, no explicit livelihood analysis has been undertaken. It is, therefore, useful to use the sustainable livelihoods' framework to review the documents by seeking the following information:

- Who are the poor? Is there information on the types of indicators that might enable targeting of poor people?
- The poor may be defined in terms of households, individuals or different poor groups. Whilst parts of the logical framework talk of the livelihood strategies of poor households, there may be more information on different groups of people. Any analysis of household livelihood strategies also needs: to be aware of household dynamics and the role of wider family ties that may form part of household or individual livelihood strategies. Where are the poor? This point is related to the first, but reflects the peri-urban nature of the research. Which poor households are affected by peri-urban processes?

- What types of capital assets do poor people have?
- What does the peri-urban context contribute in terms of increasing/decreasing vulnerability? What constraints and opportunities exist?
- Are there examples of adaptive strategies in response to urban development?
- What structures and processes exist to transform livelihood strategies?
- What gaps exist in terms of understanding livelihood strategies and understanding responses to peri-urban processes?
- How can livelihood strategies be strengthened/made more sustainable through natural resource research and development?

Livelihoods in the peri-urban interface of Hubli-Dharwad

Poverty in India

A recent analysis of DFID's contribution to poverty reduction in India (Shepherd *et al.*, 1999, p.7) reached a number of important conclusions. Among these were the fact that most of the poor are casual workers, particularly rural workers, both agricultural and non-agricultural and that wage rates are a prime determinant of poverty. Within the poor, female-headed households, and households with large numbers of children, were especially vulnerable. Scheduled tribes are the most economically destitute within the rural population. And in terms of both extent and severity, scheduled tribes and castes together are significantly more affected by poverty than the population as a whole.

The study also found linkages between income poverty reduction and the initial level of female labour force participation. It concluded that where women are part of the labour force, poor households have more working members, may be less vulnerable to shocks and may be able to take more risks and make investments. It also found that men may be freer to migrate for employment, an important strategy for poor households especially in the remoter areas. Finally, it concluded that women, and therefore girl children, may be more highly valued.

While these observations present positive impacts from women entering paid labour, there are implications for their health and childcare, which may both suffer due to extreme work burdens. Women are often paid the lowest wages for the most backbreaking work. These brief conclusions can be used to guide analysis of the situation in the Hubli-Dharwad city-region and to assist in identifying poor households and poverty trends in the city-region.

Who and where are the poor in the Hubli-Dharwad city region?

There is little explicit information on the level of poverty in the Hubli-Dharwad city-region. Work undertaken in the NRSP Peri-urban Interface programme, however, has identified a number of indicators that could be used to identify poor households. These include:

- Occupations of household members and how many household members have paid employment. Members of poor households are more likely to work as casual labourers. Women working outside the family may be an indicator of a poor household.
- Income levels, either as a day rate (e.g. women receive between Rs.20-25 a day in agricultural work), or income from farming. Such information may be provided by village accountants.
- Land holdings. Poor households will have either very little land or no land at all. Information on land holdings in villages and on crop yields can be provided by village accountants in villages outside the Hubli-Dharwad Municipal Corporation boundary.
- Access to common property resources is often critical to poor households, particularly if they own livestock.
- Family size and level of education. These factors can indicate levels of deprivation (e.g. large family, few household members in paid employment and low levels of education).
- Ownership of a green card to access food at low prices, which have been distributed in the last few years to low-income households in rural areas. Criteria assessed include income, land holding and other livelihood activities carried out by the household.

The indicators set out above could be used to explore the extent and characteristics of poverty in the city-region. Other indicators of where poor households may live include the existence of slum areas within the urban boundary.

A study of urban agriculture in Hubli-Dharwad looked at the existence of slum areas within the city as an indicator of where the poor lived. In 1981, there were 52 notified slums in the city and slum dwellers represented 8.68% of the total population. Recent figures taken from 1998/99 indicate that the number of slum areas has slightly decreased, with 31 identified and registered slums in Dharwad and 15 in Hubli (Nunan, 1999). The number of people living in slum areas has, however, increased by 17.55% to 16,738. This is slightly less than the population growth rate between 1981 and 1991. The slum population does not account for all households living below the poverty line. Indeed, it has been suggested that more than 40% of the urban poor do not live in slum areas in India (Shepherd *et al.*, 1999). There are, at present, no other indicators of the location of poor households within Hubli-Dharwad. However, research does indicate, that, in India, the urban poor are characterised as having casual employment or self-employment in the informal sector, and that poverty amongst female headed households is more serious within urban areas than rural (Shepherd *et al.*, 1999).

Scheduled castes and tribes are often prevalent amongst the poor in India. The Baseline Study (University of Birmingham *et al.*, 1998b) analysed data in five taluks closest to Hubli-Dharwad in a range of areas. Data on the numbers of scheduled tribes and castes was collected for the five taluks, taken from census data. It was found that only 61,077 (8.6%) of the population in the five taluks were members of scheduled castes according to the 1991 census. Only 23 villages, 6.5% of the villages in these taluks, had over 20% of their population classified as scheduled castes and 12,789 (1.8%) of the population in the five taluks were classified as scheduled tribes. Some villages, however, have higher concentrations of scheduled castes and tribes than others.

Finally, small farmers are more likely to be poorer than farmers owning more land. This is not always the case, however, as farmers may rent land from other landowners or may be involved in substantial income generating activities outside of agriculture. There has not been enough information gathered to date to know the extent of poverty amongst small farmers in the Hubli-Dharwad city-region. In the Baseline Study, however, it was found that small farmers tend to be found in larger numbers in wetter red soil areas (to the south and west of Hubli-Dharwad), whilst large landowners tend to be concentrated in the drier east, where dryland farming takes place on black cotton soil (University of Birmingham *et al.*, 1998b).

Analysis of asset status

Most information about the capital assets of poor households or groups has been collected in the area of income generating activities. These are discussed in the section on financial assets and a number of household case studies illustrate the diversity of income sources that some households rely on, partly in response to urbanisation.

Natural capital

Information has been collected on land use, water resources and forest cover. There is little information, however, on entitlement issues, that is the level of access to, and control of, natural resources. The Census does not provide information on who owns lands, including absentee landlordism with rented plots or share cropping (University of Birmingham *et al.*, 1998a, p.23). However, the village surveys obtained some information. Village informants quantified landowners in various categories for 1987 and 1997 (*ibid.*, p.33). Land records exist which provide information on each plot of land within a village, but they are in several forms and in several places (*ibid.*, p.116). Land is traded, but village surveys provide only general impressions of what types of purchasers are buying land, whether it is farmers for other villages or urban dwellers buying land for investment or speculative purposes. Little information exists on who is involved in land transactions. Government actors in land planning and other land management activities are obviously known locally, yet they seem to be largely ineffective and may not figure as important stakeholders (*ibid.*, p.106-118). It was found in the Baseline Study (c.f. R6825) that in many villages land has only been sold to local people. The operation of the land market is poorly understood, yet this is a vital component of natural capital. It is not known what are the livelihood strategies of previous land owners who have sold this asset.

There has been little discussion of access issues. Land is passed down through generations and divided between sons. In some villages, it has been noted that some poorer farmers are farming more marginal land, but not enough information has been collected to date on the type and amount of land farmed by small, poor, farmers.

The amount of land used for agriculture and other purposes was provided in the Baseline Study report for the five taluks, but no information is given on access to land. The indicators all illustrate a decline in the availability of land per cultivator within the five taluks. Land pressures appear to be greatest in Hubli and Dharwad taluks, though it is not clear whether this is due to out-migration of households in the other three taluks studied, or because of in-migration into Hubli and Dharwad (University of Birmingham *et al.*, 1998b, p.181) However, eight villages further from the city limits were found to have greater land pressures, suggesting that more complex factors are at work causing land pressures and land shortages than in-migration and proximity to the municipal boundaries (University of Birmingham *et al.*, 1998b, p.182)

Only a small proportion of land is defined as culturable wasteland², which includes common land. Some of the villages studied showed a decline in the amount of common land, whilst others, particularly villages in the three taluks close to the city, appeared to have more common land available in 1997 than 1987. University of Birmingham *et al.*, (1998b, p.22) speculated that this could be due to the abandonment of farm land near to the city, but this has not been confirmed. The availability of common land has an impact on the ability of the landless, and possibly small farmers, to keep livestock. Where the amount of common land is decreasing, animals are likely to be grazed on crop residues. Nidagundi and Patil (1999, p.6) note that the Gram Panchayat (village council) is able to charge a fee for grazing cattle in the grazing lands. They also record that

the right to grazing or collect other produce of all unoccupied land vesting in Government, whether such lands are surveyed, settled and assessed or not and of lands specially reserved for grass or for razing (except lands assigned to villages for free pasturage), may be sold by public auction every year, either field by field or in tracts, and at such time as the Deputy Commissioner shall determine (Nidagundi and Patil, 1999, p.26).

However, more information ought to be collected on how such regulations impact in practice on the access of livestock keepers to grazing land.

Details on the area of forested land are given in University of Birmingham *et al.* (1998b, p.183) and there is some discussion of issues surrounding access to the forest areas. In some of the villages studied, villagers access the nearby forests for fuelwood and for leaves to make leaf plates. Although it does appear that there is less fuelwood available than ten years ago, people have not expressed concern

over shortages in any of the studies undertaken (University of Birmingham *et al.*, 1998b, Wilkinson, 1999).

Finally, water resources have been studied in terms of water supplied to the city and access to borewells. It has also been reported that many tanks in the urban area have dried out and built over. There is concern about the effects on the micro-climate and hydrology, though this has not been researched. Low-income households in villages around Hubli-Dharwad use tanks for laundry and washing buffaloes and cattle. Issues of management of, and access to, tanks around the city region have not been studied in-depth.

Human capital

Human capital encompasses areas such as literacy, skills, good health and the ability to labour. Information on literacy levels was collected during the Baseline Study for five taluks around the city-region. The 1991 Census of India definition of literate was someone who can both read and write with understanding in any language. 42.17% of the rural population in the five taluks were considered literate in the 1991 census. The male literacy rate of 54.1% is very much higher than the female literacy level of 29.5%, but literacy levels vary between villages. The Baseline Study (University of Birmingham *et al.*, 1998b, p.169) speculated that the two easterly taluks (Navalgund and Kundgol) have better agricultural yields and may be in a better position to send children to school, accounting for higher literacy levels. Lower literacy levels close to the city could be accounted for by migration into the city by more literate people. Whatever explanations there may be, the differences between male and female literacy are significant and have implications for livelihood options for households.

Although the census data are not broken down by any other indicators, such as income level, literacy levels can be used as one indicator to identify areas or villages that may have higher incidences of poverty.

Access to health facilities has not been explored in the Hubli-Dharwad city-region, though health risks associated with the use of untreated waste have been explored in some projects. The health impacts of using untreated waste include the use of untreated sewage for irrigating and washing vegetables and the use of untreated and semi-sorted municipal solid waste as a soil amendment, though hospital waste is now being collected separately from municipal waste. A small study was undertaken in 1997 to explore the health impacts of irrigating with untreated wastewater on agricultural labourers. The results were not significant, though did indicate that skin diseases may be a particular problem associated with

the use of untreated wastewater. As members of poorer households are more likely than others to work as agricultural labourers, they will be more exposed to such health risks. Birley and Lock (1999, p.11) suggest that an understanding of the health impacts of natural resource projects is critical if projects are to be sustainable and livelihoods improved.

Social capital

Little information has been collected to date on the role of social capital in livelihood strategies through the NRSP studies. Reference has been made, though, to the role of extended families, with many members of a family often living in one house. The extended family does play an important role in providing opportunities and contacts in India. The caste system also remains important to some extent. Some of the villages studied have specific areas where members of low castes live. It is not clear, however, how the caste of a person affects their opportunities in responding to urbanisation. However, it does appear from other studies in India that members of scheduled castes and tribes are found in larger numbers in proportion to the population in poverty.

A four-village study undertaken by Nidagundi and Patil (1999) recorded that there are good social networks in some villages comprising of groups such as self-help groups, including farmers' organisations providing loans (Vyayasaya Seva Sahayaka Sangha); women's associations, e.g. Mahila Mandal, Raita Mahila Seva Sangha (an association set up by the India Development Service in Mugad village) which encourage women to save money; a dairy Co-operative Society; occupational associations, for example a Potters' Association and Fishermen's Association, which help to markets products and produce; religious groups organising festivals, ceremonies, etc.; and political involvement through the Gram Panchayat.

There is little discussion in the report, however, about the role of such networks and groups in the lives of poor households.

Physical capital

Some information on physical capital has been collected to date. The importance of access to infrastructure, particularly roads, has been noted in helping people take advantage of living relatively close to a city. Roads help to get goods to market and enable people to take up work opportunities, particularly where there are bus services to a village, especially casual work, in the city.

An area of physical capital that has been more extensively researched has been energy sources. The Baseline Study undertook several pieces of work to explore energy issues and this was followed up by a review of energy issues led by ITC (Wilkinson, 1999).

Some of the main findings from surveys in the Baseline Study include:

- Agricultural waste (e.g. cotton and chilli stalks) is the main source of fuel for cooking and heating water in rural areas.
- Landless and some occupational groups spend two to four hours a day gathering agricultural waste from farmers' fields, village streams and forest areas.
- Electricity and kerosene is used for lighting in both rural and urban areas, with poorer households more likely to use kerosene than other households, though some poor households do have electricity.
- Households in the urban slum areas mainly use firewood, twigs and branches for cooking and heating water.

ITC found that all six of their case study villages have biogas plants (Wilkinson, 1999). A key determinant of continuing to use biogas is the availability of cow dung. In some areas, the cattle population is declining, partly due to the declining availability of common grazing land.

In landless and small farm households, firewood makes up the highest proportion of total energy consumed for domestic purposes. Landless households use a slightly higher proportion of cow dung cakes than other income groups. It was found that traditional fuel sources remain and there have been no substantial changes in the types of fuels used in villages (Wilkinson, 1999). Dung cakes remain popular with the poor as they are free to produce, though take time. Women from non-cattle owning households (often the poorest) collect dung from the roadside or grazing land when returning from working in the fields and make them into cakes (ibid, p. 4.12).

The ITC study also explored preferences for different types of fuels. Ranking exercises showed that there is a clear preference for modern fuels for cooking in all social categories. However, landless labourers were the only ones to rank kerosene above LPG and biogas. This ranking may be due to the fact that it is more affordable than other modern fuels and can be purchased in small

quantities. All categories of respondent ranked traditional fuels as best for heating water. Finally, all villages surveyed preferred electricity to kerosene for lighting. In the women only group meetings, preferences were divided by age groups (though the groups did not differentiate by social group). Younger women preferred modern fuels, whilst their mothers and grandmothers preferred traditional fuels (Wilkinson, 1999, p. 4.8).

The frequency of collection of fuelwood differs according to income group, with wealthier households using tractors and trailers or bullock carts to collect fuelwood only a few times a year. Labourers are sometimes employed to do this. Landless labourers collect fuelwood either daily or weekly, depending on storage space, taking between four and ten hours a week. It was felt that over the last ten years, the distance needed to collect fuelwood has increased and it takes 50% longer.

Some poor households gain access to cotton stalks to use as fuelwood by exchanging labour for cotton stalks. These crop residues are stored outside and will rot in the rains, and so, large farmers may not be able to consume all the stalks, providing an opportunity for exchange and an alternative to firewood. Wilkinson (Wilkinson, 1999, p. 4.12) notes, however, that information was not collected on whether women collect crop residues and whether there are gender implications resulting from the increasing use of crop residues as a fuel.

Financial capital

Most information collected to date has been on income generating activities. Very little information has been collected on access to credit by small farmers, though some of the farmers studied in the waste research have borrowed money from moneylenders and banks, whilst one was a moneylender himself (University of Birmingham *et al.*, 1999a). No information has been collected on remittances either from the urban area to rural areas, or to Hubli-Dharwad from family members in other cities or countries. Source of credit for small, poor, farmers or livestock keepers may be an area needing further investigation.

Information on employment and income generating activities has largely been taken from census data, though there are case studies of individuals that illustrate the diversity of income sources that exist in some households (see Box 6.1).

The Indian Census defines workers as those who participated in any economically productive activity for at least 183 days during the preceding year, and marginal workers as those who worked less than 183 days. It has been noted

that many poor households rely on agricultural labour as their main source of income and data on the numbers involved in agricultural activities in the Hubli-Dharwad city region have been explored. The figures for males and females working in agriculture in the rural areas of Dharwad District³ and Karnataka State are given in Tables 6.1 and 6.2. In the census, agricultural activities were categorised as cultivation, agricultural labourer and livestock farmer. There is no information in the census data on income groups within the agricultural sector, though it is likely that most, if not all, agricultural labourers are lower income people, and, as seen by the figures in Tables 6.2 and 6.4, many of these are women.

Tables 6.1 and 6.2 show the dependence on agriculture in the rural areas of the District and the State. Within Dharwad District, the proportion of women working as agricultural labourers, as opposed to being cultivators or livestock keepers, is particularly striking.

Table 6.1 Share of the rural male workforce relying on agricultural activities in Karnataka State and Dharwad District, 1981-1991 (%)

Activity	1981		1991		Change (%)	
	Karnataka	Dharwad District	Karnataka	Dharwad District	Karnataka	Dharwad District
Cultivation	55.3	47.7	50.6	45.2	-8.5	-5.2
Agricultural Labourer	23.6	34.8	26.4	35.9	11.9	3.1
Livestock Farmer*	4.6	2.2	4.6	1.9	-0.9	-16.1
Total agricultural activity	83.6	84.73	81.7	83.0	-2.3	-2.1

Source: Vyasulu (1997, p.17), with data taken from census results.

Table 6.2 Share of the rural female workforce relying on agricultural activities in Karnataka State and Dharwad District, 1981-1991 (%)

Activity	1981		1991		Change (%)	
	Karnataka	Dharwad District	Karnataka	Dharwad District	Karnataka	Dharwad District
Cultivation	28.4	19.4	29.6	22.5	4.4	16.0
Agricultural Labourer	55.0	73.8	55.6	70.9	1.1	-4.0
Livestock Farmer*	4.0	0.4	3.3	0.3	-16.8	-11.1
Total agricultural activity	87.4	93.6	88.6	93.7	1.3	0.2

Source: Vyasulu (1997, p.17), with data taken from census results

Tables 6.3 and 6.4 give the figures for the share of people working in agricultural activities in urban areas. In Hubli-Dharwad city this share declined from around 13.7% in 1981 to 12.4% in 1991. Hubli-Dharwad is by far the largest urban centre in Dharwad District and is the third largest urban agglomeration in the State of Karnataka. This may account for the lower figures involved in urban agricultural activities, with greater opportunities for casual and permanent non-agricultural employment.

The share of the urban female workforce relying on agricultural activities in all the urban areas of Karnataka is much higher than that of the male workforce thus suggesting that agricultural activities are very important as a source of income for women. The highest percentage is for agricultural labour. Although there has been a decrease in Hubli-Dharwad, agricultural activities remain a significant employment opportunity for the urban female workforce.

This is consistent with the findings of village surveys within the Baseline Study (c.f.R6825), which found that female occupation within casual farm work has increased relative to male employment in five taluka close to the city. Male employment in casual farm labour decreased due to more males taking up urban-based casual employment, particularly construction work (University of Birmingham *et al.*, 1998b). In the Baseline Study, in 22 of the 25 villages surveyed, it was found that most labourers were engaged in agricultural work. While there was an increase of 16.6% in the number of agricultural labourers between 1987 and 1997, however, there were much greater increases in the numbers of industrial (49%) and construction workers (153%) (University of

Birmingham *et al.*, 1998b, p.29).. In 1997, 15% of the agricultural labourers worked outside the village. Travelling to work outside the home village increased over the decade.

Table 6.3 Share of the urban male workforce relying on urban agricultural activities in Karnataka State, Dharwad District and Hubli-Dharwad city, 1981-1991 (%)

Activity	1981			1991			Change 1981-1991 (%)		
	Karnataka	Dharwad District	Hubli-Dharwad	Karnataka	Dharwad District	Hubli-Dharwad	Karnataka	Dharwad District	Hubli-Dharwad
Cultivation	7.5	12.0	6.0	6.1	10.5	5.5	-19.5	-12.2	-8.8
Agricultural labourer	6.0	12.4	5.4	5.8	11.6	4.3	-3.0	-6.3	-21.4
Livestock farmer*	1.8	1.6	--	1.9	1.6	1.2	3.9	-1.2	--
Total agricultural activity	15.4	26.0	11.5	13.8	23.8	10.9	-10.3	-8.7	-4.5

*Livestock farmer figure not available for 1981 in Hubli-Dharwad, so total agricultural activity figure is a slight underestimate.

Source: Vyasulu (1997, p.17), from data taken from census results for Karnataka State and Dharwad District. Figures for Hubli-Dharwad taken directly from census results.

Men working as agricultural labourers earn between Rs.20 to 50 a day, compared with Rs.20 to 30 a day for women. Wages differ according to the type of activity and those that women are involved with tend to attract a lower wage (Nunan, 1999, p.41). These activities are mainly weeding and harvesting.

The number of workers engaged in non-farm activities increased by 36.2% in the five taluka between 1981 and 1991. Male non-farm workers increased by 38.4% and female non-farm workers by 24.9%. Changes appear to be most pronounced near to the city. In Hubli taluk, for example, nearly 27% of villages (where there was information for both years), had an increase of over 100% in the number of non-farm workers over the decade (University of Birmingham *et al.*, 1998b, p.177). In some villages, though, there was a reduction in the number of non-farm workers, perhaps suggesting that village enterprises were not able to compete with the city, or that non-farm workers were moving to the city.

Table 6.4 Share of the urban female workforce relying on urban agricultural activities in Karnataka State, Dharwad District and Hubli-Dharwad city, 1981-1991 (%)

Activity	1981			1991			Change 1981-1991 (%)		
	Karnataka	Dharwad District	Hubli-Dharwad	Karnataka	Dharwad District	Hubli-Dharwad	Karnataka	Dharwad District	Hubli-Dharwad
Cultivation	5.4	7.1	4.8	5.2	9.5	5.0	-3.7	33.6	4.0
Agricultural labourer	21.3	43.4	21.5	18.5	38.7	14.4	-12.8	-10.9	-33.0
Livestock farmer*	1.3	0.9	--	1.3	0.5	0.7	-37.7	--	--
Total agricultural activity	27.9	51.4	26.2	25.0	48.7	20.0	-10.4	-5.1	-23.5

*Livestock farmer figure not available for 1981 in Hubli-Dharwad, so total agricultural activity figure is a slight underestimate.

Source: Vyasulu (1997, p.17), from data taken from census results for Karnataka State and Dharwad District. Figures for Hubli-Dharwad taken directly from census result

The importance of agricultural work is again illustrated in Table 6.5, which summarises some of the findings from the survey of 25 villages in five taluka in the Baseline Study. The survey results revealed that many low-income groups work as agricultural labourers and that there has been a loss of common land in some villages, resulting from house building and industrial plants. In villages that are well connected to the city by roads and bus services, many landless labourers are increasingly taking on construction and road-building work. This has caused labour shortages in some areas, contributing to changes in cropping patterns and to recruiting labourers from villages further from the city.

The studies also reveal that landless labourers undertake seasonal work, such as construction work, at times of low demand for agricultural work and also undertake activities such as selling produce for farmers in the cities. These findings have been confirmed by further village studies conducted by Nidagundi and Patil (1999), though in some villages the shift away from agricultural labour was attributed to declining productivity resulting from increasingly erratic rainfall patterns.

Case studies of income sources

In a number of the projects undertaken, household case studies have generated information on livelihood strategies, particularly in relation to the diversity of income sources that people have. In a study on urban agriculture, for example, a number of households were interviewed to discover how important livestock keeping is for their livelihood. Some households in the city keep only two or three buffaloes, which contribute to their livelihood through selling milk and providing milk for the household. It does appear, however, that poorer households keeping buffaloes sell more of the milk produced and keep back less for home consumption than wealthier households (Nunan, 1999). The case study of Shankar Bendre's household in Dharwad city illustrates the role of buffalo keeping in a household livelihood strategy. Box 6.1 summarises the range of income sources for two other households, as illustrations of how living near to, or in, a city can help to generate a range of income sources.

Some agricultural households have responded to labour shortages by recruiting labour from villages further from the city, increasing the use of tractors and other mechanical implements and changing cropping patterns. There is not much evidence to date of many people abandoning agriculture because of the declining availability of labour.

The peri-urban features of the city region identified in University of Birmingham *et al.* (1998b, p.10). may assist in understanding how households have responded to changes brought about by urbanisation. The report concludes that there is uneven development between villages; explanatory factors include soil type (red and black); accessibility (roads and bus services); availability of irrigation facilities. Social differences appear to widen as villages experience greater influence from the urban areas. It also concludes that there is high degree of 'rurality': rural activities are important to some urban residents (e.g. urban dairies, owning rural land to grow own produce); big industry some distance from the city. Finally, it becomes clear that there is a dearth of information about the 'peri-urban interface'.

These features make identifying poor households and understanding their livelihood strategies a complex process, as they are located in different villages and parts of the city and respond to urbanisation differently.

The conclusions identified by Rakodi (1999) imply that some households may become more vulnerable in terms of poverty as an urban area expands than others. Little evidence of increasing polarisation has been collected in the Hubli-

Dharwad city-region, though it has not been actively sought to date. There is, however, some grazing

The vulnerability context in the peri-urban interface of Hubli-Dharwad

Urbanisation can be expected to bring about changes in the livelihood strategies of households in villages close to the urban area. This has been found in Hubli-Dharwad, though most evidence of responding to urbanisation to date points to landless labourers taking advantage of casual employment to either replace agricultural work altogether or to provide work when demand for agricultural work is low. Urbanisation, in this situation, helps landless households cope with the seasonality of demand for agricultural work. It has been noted that the increase in non-farm employment has been particularly marked for men (University of Birmingham *et al.*, 1998b, p.18). Given that female non-farm work increased much more slowly than male, most women were finding work in the lower paid farm sector, though women are paid less than men in the agricultural sector. There have, therefore, been changes in the labour markets, but there has been no evidence of wages for agricultural work rising significantly to attract labour.

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The conclusions identified by Rakodi (1999) imply that some households may become more vulnerable in terms of poverty as an urban area expands than others. Little evidence of increasing polarisation has been collected in the Hubli-Dharwad city-region, though it has not been actively sought to date. There is, however, some evidence of increasing pressure on common property resources, particularly grazing land and tanks, which could increase the vulnerability of poor households by reducing their ability to keep livestock. There is also evidence of increasing competition for some resources between urban, peri-urban and rural areas, particularly in the areas of electricity and water. These resources are not supplied in adequate amounts to satisfy agricultural, industrial and/or domestic demands, and the inadequate supply is affecting development in the city region. Access to irrigation facilities has been observed to be an important factor in increasing agricultural productivity of dryland farming, for example.

Transforming structures and processes in Hubli-Dharwad

There are several areas in which information has been collected on structures and processes that affect household livelihood strategies. These include access to markets for agricultural produce, the effects of incorporating villages into the Hubli-Dharwad Municipal Corporation boundary and land-use planning processes. Inadequacies in the marketing of produce in local markets were noted in the Baseline Study report. The marketing of horticultural produce is broadly the same for produce grown close to the city and further away. Though small farmers living close to the city have easy access to markets, farmers with access to a bus route into the city can still bring produce in relatively frequently. This is particularly important in Hubli-Dharwad because of the lack of cold storage facilities. Produce has to be sold quickly, and, therefore, frequently. Some farmers employ people (generally women) to sell fruit and vegetables on their behalf in the markets and alongside the main roads. This is on a casual, or informal, basis.

The Baseline Study report found, however, that local agricultural markets were fragmented, with "insufficient linkages to the state, national and international markets resulting in highly localised gluts, sporadic price collapse and price signal distortions" (University of Birmingham *et al.*, 1998b, p.50) These problems may deter farmers from taking risks, especially poorer farmers. Although there are organisations set up to assist in marketing, such as the Karnataka Horticultural Producer's Co-operative Marketing and Export Society, it is not clear how much such organisations benefit small, poor farmers.

As was noted in chapter 2, when villages are incorporated into the Hubli-Dharwad Municipal Corporation (HDMC) boundary they lose their village council (Panchayat) and have to elect representatives to the Corporation. The village council, made up of members from the village, is closer to the village in terms of decision-making, while the HDMC seems more remote and less accessible. This change of power must have effects on people's ability to respond to urban influence. The incorporation into the HDMC boundary also means that people lose access to the State's Department of Agriculture and the associated agricultural assistants, meaning that farmers cannot easily access new information and cannot

Box 6.1 Case studies of household income sources in Hubli-Dharwad

Shankar Bedre, Dharwad city

Shankar's family comes from a tradition of keeping buffalo. They presently have two buffalo, both milking, producing 3-4 litres a day. Half a litre is kept for home consumption and the rest is sold to residential customers in the nearby locality. The husband milks the buffalo and the son delivers it to customers, in the morning and evening. Both the husband and wife have other sources of income. Shankar's husband works in a hotel and she takes on casual work, in the form of washing and cleaning, in big houses. She does this twice a day, leaving the children to look after themselves. The family gets around Rs.1300 a month from waged work and Rs.900 from buffalo. The family uses dung cakes for cooking and collects enough dung for around one tractor load. This is sold to farmers who come to the area looking for dung in May or June.

Jumma, Dharwad city

Jumma's family has 20 sheep at present, some of which are milking. There are nine people in the household and about half the household's income comes from keeping sheep (around Rs.100-200 per week). The sons undertake daily labour, mostly construction work, for Rs.50 per day and the daughter picks cotton. The women in the household look after the sheep. The family were traditionally gowlies, but had to sell their buffaloes, around 10-15 years ago, to raise money. They found it too expensive to keep buffalo, particularly buying fodder, and find it easier to graze sheep. They get Rs.600 per sheep for meat, which are sold when the family needs the money, in the local market, directly to consumers who then arrange the slaughter. The family occasionally keep milk from the sheep for home consumption, but never kill a sheep for home consumption. The family also keeps four layer hens. They collect around one tractor load of dung per year from the sheep, which they keep tied up at night, just next to their house. The dung is stored until there is enough to sell and is sold for Rs.200-300. *Source:* Nuna (2000)

Bassappa Lakkalla Kumbar, Mugad

Bassappa Lakkalla Kumbar lives with his wife, son and daughter and has two acres of land in Mugad. In addition to growing rice for home consumption, the husband and wife are potters, and the husband works on other farms or in road preparation for three months, earning around Rs.40 a day. His wife works in their fields during peak labour-demanding periods. He hires one other labourer for sowing and between 10 and 12 for weeding and harvesting. Bassappa owns two bullocks and a cart and uses manure as a soil amendment. *Source:* University of Birmingham *et al.* (1999a, p.36).

access subsidies and rural credit schemes. Again, there must be negative impacts for small, poor, farmers in particular. This area of concern has been identified in the research process, but has not been researched in depth.

As was discussed in chapter 2, land-use planning is undertaken by the Hubli-Dharwad Urban development Authority, whose boundary extends beyond that of the HDMC. Changing the use of land will impact on poor households, by losing agricultural land and/or by providing new opportunities for construction and industrial work. The land use planning process does not use an extensive system of consultation to obtain a wide range of views. Poorer households could lose out by losing access to common property resources and to agricultural work if they are not able to take advantage of urban work.

Sustainable livelihoods in peri-urban Hubli-Dharwad: Concluding comments

To conclude, the above review has noted information in the following areas:

- There is some information on indicators of poverty, but these could be further researched. Much information can be collected at village level, but area specific information is harder to obtain in the city.
- Landless labourers are identified as a poor group, but many are responding to opportunities presented by the urban area, using casual work to supplement or replace agricultural work.
- Some evidence of detrimental impacts on common property resources, resulting from privatisation. Impact on the livelihoods of poor households can be speculated, but have not been researched.
- There is a range of information available on the types of assets that households may access to sustain their livelihoods, but not all the information can be disaggregated. It is not, therefore, always clear that poor households have access to the assets discussed in this paper, such as land and social networks.

It also appears from the review that not enough is known about the extent of poverty amongst small farmers. Whilst it is evident that agricultural labourers receive a low wage (compared to urban casual work), working with small farmer. Livestock may play an important role in the livelihood strategies of poor households, but this area could be further researched, particularly in relation to access to common property resources.

Gender aspects of changes brought about by urban development have been noted in terms of more women entering paid farm work and in the increasing time it takes to collect fuelwood. From the analysis of poverty in India quoted earlier (Shepherd *et al.*, 1999), it seems critical that gender dimensions of natural resource management are understood and built upon in peri-urban research.

Finally, little information has been collected on the role of migrants in peri-urban natural resource management in Hubli-Dharwad. One study on the valuation of peri-urban natural resources noted that fisherfolk come from Tamil Nadu to fish in Unkal tank during the four-month fishing season (Nunan *et al.*, 2000). Unkal tank is on the outskirts of Hubli and a contract for fishing is given to a contractor by HDMC each year. The extent of seasonal migration to and from Hubli-Dharwad has not been researched as part of this programme. There may be impacts from urbanisation on the livelihoods of migrants, both in terms of new opportunities (e.g. agricultural work) and in limiting opportunities (e.g. the tank could be cleaned up and used as a source of drinking water).

Livelihoods in the peri-urban interface of Kumasi

Poverty in Ghana

Poverty in Ghana has been defined as "a composite of personal and community life situations. On the personal level it is manifested by the inability of the individual or the household to acquire the basic necessities of life in terms of food, shelter and clothing. At the community level the absence to low level of basic community services such as health, education, water supply and sanitation, and in terms of incomes, subsisting on incomes that are less than two-thirds the national average" areas (Nsiah-Gyabaah, 1998, p. 2). It is also said that as a result of the high incidence of poverty in the rural areas and among the farming population, poverty in Ghana has largely been described as a rural problem. Consequently major poverty alleviation programmes have concentrated on the rural areas to the neglect of the peri-urban and urban poor. It is clear from recent studies that the incidence and depth of poverty is on the increase especially in peri-urban areas (*ibid.*).

For the purposes of characterising livelihoods in Kumasi's peri-urban interface, this review consulted a number of outputs from the Kumasi Natural Resource Management Research Project (KNRMP), as well as other studies. An important source of information was a Village Characterisation Study (VCS) conducted within the KNRMP with the aim of determining "the characteristics of

peri-urban villages in terms of their natural resource management, community structures and relationships to Kumasi" (Blake *et al.*, 1997a, p.11). Sixty-six villages within a 40 km radius of the city centre were selected using a stratified random design. Another useful source of information was a separate survey of eight peri-urban villages as part of a wider study into urbanisation, land markets and gender insecurity funded by the Nairobi-based Mazingira Institute (Kasanga, 1998).

Who and where are the poor in the Kumasi city region?

Table 6.6 describes the main and supplementary occupations of the sample of 480 people in the eight peri-urban villages of the Mazingira study, the furthest of which is located about 25 km from the city (see chapter 2 for more information on Kumasi's peri-urban interface).

The continued importance of agriculture is evident, as 37% of the population have reported farming as their main occupation, but this is particularly so for women. Further data in Kasanga (1998, p.94) shows a clear influence of marital status; of the single people interviewed only 17% of the women and 33% of the men were still farming.

There is also a clear difference in the non-farm occupations of men and women. Women were more likely to take to trading, whereas men are more likely to take advantage of the construction work available, or have skills that allow them to operate as artisans or craftsmen. The data emphasise the tendency for a greater range of opportunities taken up by men than women.

Surprisingly, only 2% reported that they had supplementary occupations (although it was clear from KNRMP family case studies that there was diversification *within* many of the households; Nkrumah *et al.*, 1998). This lack of diversity could be associated with the high rate of unemployment (17%) shown in Table 6.6. This was confirmed as an increasingly threatening problem in the livelihood studies, resulting from a lack of economic alternatives, a situation for which people were ill prepared (Nkrumah *et al.*, 1998). Even young people with an education were unable to get a job (Blake *et al.*, 1997a, p.39).

Table 6.6 Occupations of respondents in eight villages of peri-urban Kumasi, 1997

Occupation	Women		Men		Total	
	Number	%	Number	%	Number	%
1. Major occupation						
Unemployed	59	18	24	15	83	17
Farming	130	41	47	29	177	37
Salary (teaching, civil servant)	2	0.5	10	6	12	2.5
Trader/Business/Hotel/Restaurant	77	24	11	7	88	18
Construction/metal work	4	1.5	29	18	33	7
Student/pupil	28	9	9	6	37	8
Others, including artisans/craftsmen	20	6	30	19	50	10
2. Supplementary occupation						
None	315	98	156	97.5	471	98
Farming	3	1	3	2	6	1
Trader	1	0.5	--	--	1	0.2
Construction	0	--	1	0.5	1	0.2
Others	1	0.5	--	--	1	0.2
All respondents	320	100	160	100	480	100

Note: Percentages may not add up to 100 due to rounding.

Source: Derived from Kasanga (1998) Table 18

The KNRMP study included a survey of wealth perceptions among peri-urban, rural and urban villagers in the peri-urban interface of Kumasi (Nkrumah and Antoh, n.d.). According to the informants' perceptions (Table 6.7), the main determinant of the position of an individual in terms of relative wealth/poverty is their principal occupation or source of livelihood. Other groups identified in other studies include the landless, the homeless, migrants and youth, who still naturally fall into one or other of the above groups according to how they make their livelihoods, but who have a particular set of circumstances in common that have also been considered.

The only physical assets mentioned that specifically indicated relative wealth were house, car, number of farms and the corn mill. Ownership of livestock was not mentioned at all. Only two social factors (apart from occupations) were

mentioned: royalty indicated relative wealth, and disabilities and old age placed people in the poorest group if they received little or no support from family.

Chiefs and the royal family have the right to sell land and this is associated with wealth, notably in the urban and one of the peri-urban villages, where pressure to sell land for development is more significant. However it was clear from the family studies (Nkrumah *et al.*, 1998, p. 77) that women of royal families have lost farmland to development and no longer own any land themselves. There was also the instance where the niece and nephew of the chief in another village were unemployed, working on construction sites when the opportunity arose (Nkrumah *e al.*, p. 37-38). It may be reasonable to use 'royalty' as an indication of relative wealth for the queen mother and chief, but the benefits may not necessarily pass on to the least directly connected family members as might be commonly assumed.

The ownership of houses and vehicles (for private use or commercial use) indicate wealth, but these were the only material possessions mentioned in the characterisation of the different wealth strata in the peri-urban and urban villages. In the rural village (Swedru) the number of fields a farmer owns was also an indicator.

Cacao farmers were classed amongst the rich in all four villages, as were vegetable farmers, but the latter always hold a lower position of wealth than the former. In the urban and peri-urban villages food crop farmers were considered poor, and those farming small plots were in the poorest category. In Swedru, a more rural area, those with more than a farm were still considered amongst the wealthy.

Table 6.7 Perceived characteristics of wealth strata in the four study villages selected for the KNRMRP livelihood survey

Surveyed villages ^a	Wealth classification ^b				
	Poorest	Poor	Moderately rich	Rich	Very Rich
Apatrapa (urban)	Small scale farmers, unemployed, disabled/aged, casual labourers	Craftsmen ^c , kiosk operators, petty traders, cooked food sellers, food crop farmers on family land.	Shop owners, master artisans, vegetable farmer, mechanics, drivers, salary workers	Own a vehicle, managers, cocoa farmers, children abroad	Own house/car, royal contractors, business-men
Aburas (peri-urban)o	Small scale farmers, unemployed, unsupported disabled/aged, casual labourers	Petty traders, cooked food sellers, construction workers, cobblers, food crop producers <i>Craftspeople, kiosk operators</i>	Craftspeople, kiosk operators <i>Master artisans, vegetable farmers, mechanics, drivers, salary workers</i>	Cacao farmers, traders/store keepers, children abroad, master artisans, vegetable farmers, mechanics, drivers, salary workers	Own house/car, royal (access to sell land), business-men, managers

- a. According to KNRMP's Village Characterisation Study cluster definitions.
- b. The items in italics represent the response of one of three informants who divided people into five categories while the remaining two informants only devised four categories. There are clearly subdivisions within the main strata. The same also occurred with the information from Apatrapa, where one informant identified six groups, where various crafts-people and kiosk operators were "moderately poor" as opposed to just poor. This is not a problem when all the information is presented as it is in the report and the method of analysis takes it into account.
- c. Masons, construction workers, carpenters, hairdressers, dressmakers.

Table 6.7 (continued) Perceived characteristics of wealth strata.

Surveyed villages ^a	Poorest	Poor	Moderately rich	Rich	Very rich
Duasi (peri-urban)	Small scale farmers, unemployed, unsupported disabled/aged, casual labourers	Craftsmen, kiosk operators, petty traders, cooked food sellers, food crop farmers on family land.	Shop owners, master artisans, vegetable farmer, mechanics, drivers, salary workers, craftsmen	Own a house & vehicle, cocoa farmers, businessmen, managers, corn mill owner, children abroad	
Swedru (rural)	<i>Small scale farmers</i> unemployed, unsupported, disabled/aged, casual labourers	Cobblers, petty traders, construction workers, cooked food sellers, <i>small scale farmers</i> /food crop farmers/ farmers with one farm	<i>Craftsmen, kiosk operators, farmers with more than one farm^c</i>	Shop owners, traders Master artisans Vegetable farmers Drivers, <i>salary workers</i> . Craftsmen, Kiosk operators. Farmers with more than one farm.	Salary workers Children abroad Own house/vehicle Cocoa farmers

Source: Derived from the results described in Nkrumah and Antoh (n.d.)

Education was not mentioned as an indicator of wealth in the wealth ranking exercise, although the effect of higher education or skills acquisition is notable from the relative positions of occupations dependent on differing levels of education and skills training.

The learning of vocational skills as an apprentice or through training was one of the ways by which three in ten of the homeless hoped to gain a trade and escape their poverty. However, the opportunities were limited by the fact that training had to be paid for and tools bought. Even when one had completed training, the money required to set up in business was a major constraint (Anonymous, 1999a).

Those who have children abroad are considered wealthy. It is not known whether this is an accurate indication of wealth based on the education/skills levels needed by children to get jobs abroad, or based on significance of remittances sent home. The family case studies give some examples of those whose children abroad have not done well and are considered in a worse situation than they would be if they had remained at home. There are others whose grand-children are working in the US and Japan, and who send remittances, but the family head has still been classed as poor.

The livelihoods of the poorest group are characterised by a lack of security and dependency. The small-scale farmers may have to rent, sharecrop, or squat to obtain land, or simply do not have enough land from which to make a living. They do not have security of tenure. Casual labourers must rely on opportunities to work on a day to day basis, and this could also be said for the unemployed.

In sum, the poor are characterised by livelihoods that depend on limited markets (low turnover/value and much competition), do not require significant capital or skills investment, and involved in low productivity food crops. By contrast, the livelihoods of wealthier groups are the result of access to greater skills and education levels (businessmen, teachers, and civil servants), financial capital to initiate trade or other activities (purchase stock, land, tools, equipment), ownership of family assets such as the right to sell land, possession of cocoa plantations, access to land suitable for vegetable production, and children abroad who are able to send remittances.

Livelihood types help explain the higher relative poverty of women in relation to men. Women were involved in the less lucrative economic activities that tended to fall within the lower two or three strata, whereas the more highly capitalised and lucrative assets were more likely to be owned by men (Table 6.8).

The division of non-farm occupations according to gender and age is described in Blake *et al.* (1997a, Table 13).

Table 6.8 Wealth score for women- and men-headed households in the four KNRMP study areas (%)

Location*	Surveyed villages	Women	Men	Sex gap
Urban	Apatrapa	43	50	7
Peri-urban	Aburaso	48	56	8
	Duasi	45	51	6
Rural	Swedru	51	57	6

*Classification used in the KNRMP Village Characterisation Study

Source: Derived from data in Nkrumah and Antoh (n.d.)

It appears from Table 6.8 that the wealth gap between men and women is consistent across the urban-peri-urban-rural continuum but, as mentioned above, differences in the figures calculated will once again depend on the fact that the wealth strata were specific to each village.

The more urban the village is, the greater the number of wealth strata and livelihood types identified by the informants, indicating that livelihoods become more diversified with urbanisation, but that the gap between the richest and poorest tends to increase. Differing perceptions of wealth are indicated by the difference in positions of occupations (e.g. salary workers such as teachers) in the least urban and most urban villages.

The data in Table 6.9, comparing distribution of population of the four villages amongst the different wealth strata, should be considered with this in mind. A salary worker in Swedru was given the same weight as a contractor or royal in Apatrapa. As it is in the project's interest to know the effects of the process of urbanisation on the levels of poverty and the state of poverty in general, then it may be important to complement this study with one which examines such differences specifically. This study looked at the perceptions of relative wealth *within* a village community, rather than looking at how perceptions of wealth and poverty might compare or differ from those of the other communities in the study. For instance, it may be that a salary worker in Swedru has fewer problems meeting his livelihood objectives (educating the children, obtaining adequate health care,

and so on) than a salary worker in Apatrapa, where the costs of living (e.g. rent) are higher.

Table 6.9 Differences in perceived distribution of poverty and wealth among households in selected villages (%)

Location	Surveyed villages	Poor ^a	Rich ^b
Urban	Apatrapa	56 (8)	44 (10)
Peri-urban	Aburaso	49 (4)	51 (18)
	Duasi	54 (18)	46 (13)
Rural	Swedru	54 (9)	46 (21)

a. Proportion of poorest shown in parenthesis

b. Proportion of richest shown in parenthesis

Source: Derived from data in Nkrumah and Antoh (n.d.)

Finally, it is worth noting that in the KNRMP report the method used for the calculation of wealth scores was not clearly described. This might have facilitated a more confident and accurate interpretation of the data. Knowledge of how to compile average scores can be found in Feldstein and Jiggins (1994).

Analysis of asset status

Natural Capital

As discussed earlier, this is considered to be the capital commonly available to rural communities; it includes, among other things, land for production and housing, water, fuel wood, forest/wild foods, fodder and building materials. One the assets that is undergoing greater pressure as a result of Kumasi's growth is land.

Land tenure around Kumasi has been extensively studied in general terms by much research, and there is little doubt that the key elements of it are common knowledge. The details - who owns what rights to what pieces of land after changes affected by urbanisation - are perhaps not so well known. This research has identified the details of selected cases which could be indicative of general circumstances because public expression of them in many discussions, workshops, and distributed documents seems not to have been challenged by locals. (Holland *et al.*, 1996a, p.33-37,38, Kasanga, 1998,). These are details of land ownership obtained by the PRA and the VC studies (Blake *et al.*, 1997a).

As background to the discussion, it is worth reviewing briefly some of the basic notions behind the traditional land tenure system in the region, which has recently been placed under great strain by metropolitan expansion. The Asantehene is the overall custodian of lands under the powers bestowed on him when the stools of Ashanti towns were merged into one ancestral stool, the 'Golden Stool', in the early 18th century. The categories of customary ownership type recognised are the paramount (stools), sub paramount (sub-stools), family and usufructuary titles. The system is hierarchical and at every level the subordinates each share the title to a portion of the total area. Fundamental to all Ashanti traditional practices and customary land laws is the fact that the land belongs to the whole community and whoever exercises the rights of holding or management does so in trust for the whole community. In practice, the chiefs and queen mothers exercise supervisory and administrative functions in respect to land allocation and as titular holders this applies to them (Blake *et al.*, 1997b).

A subject can acquire usufructuary rights by occupying and developing part of the communal or stool land. This is limited by the fact that forest can not be cleared past such natural boundaries as streams, thus regulating the physical extent to which a communal property could become individual and also providing easy identification of boundaries. The rights thus established are inheritable and transferable, but exclude rights to economic trees and other treasure trove found (ibid, p. 8). In other words lands thus acquired are the property of the individual or family and, according to case law, it can not, save with the express consent of the family or individual, be disposed of by the stool. Likewise an individual may not dispose of the stool's absolute ownership in it to strangers without consent of the stool (Kasanga, 1998, p. 25). If family lands became insufficient to provide for the needs of a family member, s/he could approach another family with excess land and negotiate either cash rental or the 'abuna' or 'abuso' tenancy arrangements that are similar to sharecropping in nature.

'Strangers' (those with no inherent right to occupy stool land) wanting to acquire land first approach the chief who then directs them to the sub-stool, family or individual, who gives them land - only under a grantor contract, according to custom and case law. A long undisturbed occupation does not ripen into absolute title and it is not transferable. However the stranger's interest will endure so far as he does not break the laws of the area. The traditional 'abuna' and 'abuso' sharecropping arrangements were also commonly made with strangers.

The 1992 Constitution on the role of Customary Custodians of the Land upholds the traditional land tenure system, providing it with statutory backing and there are several instances of case law cited in the project documents where it has been upheld. The laws and institutions involved in land administration are discussed in chapter 2 of this book, but sufficient has been mentioned here to show that:

- Under customary, statutory and case law (at least on paper and in theory), families and individuals belonging to the stool are reasonably assured of access and security of tenure in their land holdings - subject only to the compulsory acquisition by the state and statutory land use regulations (Kasanga, 1998, p. 25).
- A basic tenet of the customary land tenure was the fact that it assured land to every family and individual for farming and other uses. Land leases under the customary tenurial system in the past were viewed as a foreign phenomenon (Blake *et al.*, 1997b, p.22).

Increasing demand for land for residential, industrial, commercial and infrastructure development is resulting in rising land prices. Subsistence agricultural land has acquired a real value and an opportunity cost. Figures for rental value of land, rooms and for increasing purchase price of building plots are used to demonstrate the flourishing land markets in peri-urban Kumasi (Kasanga, 1998, pp.29-31).

Ninety per cent of the villages surveyed in the NRSP Kumasi Village Characterisation Study reported an increase in residential land at the expense of farmland and 11% had virtually no farmland left (Blake *et al.*, 1997a). Land demand for housing is clearly the most important factor as compared with land conversion for economic or community purposes. In the survey on gender aspects of land markets in a context of peri-urban change (Kasanga, 1998), this was also found to be the most significant reason behind the conversion of agricultural land. Of the 232 interviewed villagers who reported recent conversions of land, nearly two-thirds said it was for residential use, while only 7% reported cases of conversion to commercial or industrial use (cf. Table 6.10).

Fifty per cent of women and 46% of men (48% overall) interviewed in that same survey reported having 'lost' agricultural land. The amount of their land that was converted has been summarised in Table 6.11. Of those who reported conversions, 71% had lost areas of over 0.8 ha, a significant proportion

considering the areas of remaining land holdings shown below. There was little difference between men and women in terms of the amounts of land lost.

According to Case Law, the stool cannot dispose of a subject's property, save with the express consent of the family or individual. However, in peri-urban Kumasi, of those who reported losing land few were consulted before conversion took place. Overall, only 33% of respondents were consulted and of those only 66% agreed to the sale/conversion of their land. That is, only 22% were consulted *and* gave their consent. And whereas only 27% of the women were consulted, 47% of the men were (Kasanga, 1998, Table 13). In Akokoamong Village, to cite one example, farmers displaced when their farms are sold cannot complain about it and obtain no compensation or alternative plot because the sale is decided by the chief (Holland *et al.*, 1996b, p.19).

Table 6.10 Reported cases of land conversion from agricultural to other uses in eight peri-urban villages around Kumasi*

Agricultural land converted to:	Responses	
	Number	%
Residential	144	62
Commercial / Industrial	17	7
Education/ civic/ infrastructure	15	6
Combination of above	48	21
Others	8	3
Total	232	100

* The survey was conducted in 1997 but it is not clear from the report over what period the conversions refer to.

Source: Calculated from Kasanga (1998, Table 12).

A perusal of the data disaggregated by marital status of men and women shows that single women were more likely to be consulted than married women, but that married men were more likely to be consulted than single ones. In contrast to the significant overall difference in percentage of women and men consulted (20% in favour of men), there was little difference (only 3%) in the consultation of single men and women.

This highlights the significance of the issue of who in the family makes this decision and over which lands. Often in a couple, the woman has her own field

and the man his. The question then arises, to what extent are the respondents referring to their own or their spouse's fields in their answers? There does not seem to be information on this. Further gender-aware studies of this kind might shed light on the process to uncover whether this might be a significant factor for future research and development activities.

Despite the apparent customary and statutory provision for security of land tenure for the family and the individual (even strangers) described above, there are some key features of the land market and its management which prevent their continued positive influence. The stools may own the land and manage it on a day to day basis but the government controls all other decisions affecting the same land, from the timing of disposal to the distribution of revenue. The following describes some of the "inherent contradictions", as Kasanga (1998) calls them, that have the ultimate effect of enhancing the power of all other stakeholders, who stand to benefit from land sales to the detriment of families and individuals.

Table 6.11 Frequency and amount of land converted by village respondents from agricultural to other uses in eight peri-urban villages around Kumasi

Amount of land converted (ha)	Women		Men		Total	
	Number	%	Number	%	Number	%
0.04 – 0.8	48	30	22	30	70	30
0.81 – 2.4	63	40	31	42	94	41
2.41 – 4.0	24	15	8	11	32	14
More than 4.0	24	15	12	17	36	16
Total	159	100	73	100	232	100

* The survey was conducted in 1997 but it is not clear from the report what period the conversions refer to.

Source: Calculated from Kasanga, (1998, Table 12).

According to the "statutory underpinnings of the land market" also described in Kasanga (1998, p. 27), various institutions are charged with the task of ensuring that development takes place within approved planning layouts/schemes. However, due to failures by the relevant state institutions in the timely application of these procedures, landholding individuals have responded to the increased demand for land often in direct contravention of laws. Some plans waiting for up to 20 years for implementation have become obsolete, and developers wait on average four years for all of the relevant paperwork to be completed. Sometimes

money is exchanged between purchasers of land before the necessary procedures have been carried out ensuring their tenure.

The effects of this are evident by the haphazard siting of buildings, underdeveloped infrastructures and associated environmental problems, and severe encroachment of public lands leading to arrests and prosecution of chiefs. Land disputes and litigation have become common between the state and chiefs, between communities and even between chiefs and subjects. This seems to be worse in the case of peri-urban villages according to the VCS survey, where 43% of peri-urban villages were found to have current land disputes, as compared to 20% of the urban and rural villages (Blake *et al.*, 1997b, p.211). Litigation can last for years (e.g. Behenease's ten-year dispute with its neighbouring community), during which time disposals involving village lands are temporarily frozen.

Land Commissions have responsibility for coordinating the development of pieces of land with the relevant development plan (Brobbly, 1997, p.86), and they must certify that "disposition or development" of land is consistent with the development drawn or approved by the Planning Authority (*ibid*, p.88), but they do not seem to do this in the Kumasi PUI. Village spatial planning and district planning have not provided strategies for how this might be done to serve any particular ends relating the PUI. There seems to be no overall planning for the whole peri-urban area or in one village with regard to another village (Blake *et al.*, 1997a, p.13, 15, Williams, n.d.). There seems to be no strategy for maintaining agricultural land (Blake *et al.*, 1997a, p.15, Williams, n.d.). There is yet no strategic plan for the Kumasi Metropolitan Area which might consider options for such strategies.

The office of the Administrator of Stool Lands in conjunction with the Lands Commission collects ground rents from registered land developments. 'Drinks' money does not go to government, nor do ground rents from family-farmed land. (Blake *et al.*, 1997a). All revenue, income royalties and so on, emanating from the sale or rent of land are to be paid into the various stool land accounts and shared as prescribed by law between the various authorities (10% to office of the administration of stool land, 25% to the stool through the traditional council, 20% to the traditional authority and 55% to the District Assembly) (Blake *et al.*, 1997a). This 'sharing scheme' completely neglects the compensation of families and individuals at community level for losses of agricultural land. It is supposed to provide the local traditional authorities with community development funds, but the extent to which funds are used for the specific and real benefit

of the community is not always clear, although there are examples of this happening (Kasanga, 1998, p.39). Esereso Village has innovated by creating a Plot Allocation Committee which has taken charge of land sales and the distribution of proceeds (Holland *et al.*, 1996a, 1996b, Blake *et al.*, 1997b, 3.19) which seems to have improved the flow of proceedings from land back into investments in the village, but this does not seem to give compensation to individuals.

Only 9% of the individuals interviewed in the Mazingira study (Kasanga, 1998, Table 13) who reported loss of land said that they had been compensated; 70% of these had indeed received their compensation from the chiefs rather than the developer. The main form of compensation was by providing the family with a building plot (41%) or cash (31%). Family heads whose lands are taken generally receive some compensation from chiefs, usually a share of the plots. A farmer does not usually receive compensation directly from the chief, but from the family head, and this may be land elsewhere or money. However, in the PRA studies many claimed to receive no compensation at all. Farmers sometimes receive on the value of their standing crops. There is overall a transfer of resources from poor farmers to rich chiefs and individuals (Blake *et al.*, 1997a). Any land money which goes to community development may not necessarily benefit the poorest groups, as for example with electrification which may not be affordable (Blake *et al.*, 1997a).

According to compulsory land title registration law, a security of title is provided through registration. The customary freehold is converted to leasehold subject to payment of an annual rent; in other words, indigenous people seeking to document their interest in land end up being tenants of the stool and government. These (and probably other) features of the land market mean that land not only is the main livelihood asset of the poor under increasing threat, over which they often have little control, but that they often receive no compensation for their loss. If they were compensated they might at least retain some security and capital with which to establish alternative livelihoods.

The Compulsory Land Title Registration Law 1986 (PNDCL 152) is thought to provide important protection to those with a claim to land rights, but it is said to be largely unknown to the poor, partly because of their illiteracy. Consequently, for the moment it is the prevailing traditional tenure systems which offer the most security to the peri-urban poor rather than the statutory interventions which are too remote from them (Kasanga, 1998, p.55).

Figures on agricultural land tenure show that small farms are most common (Kasanga, 1998). Seventy-one per cent of female respondents had only one farm, compared with 65% of men, while 4% of women and 7% of men had three.

Women tend to have smaller holdings, with 81% of respondents having less than two acres, compared with 75% of men (cf. Table 6.12).

Table 6.12 Size of land holdings among respondents in eight peri-urban villages around Kumasi, 1997

Size of agricultural land holdings (acres)	Women		Men		Total	
	Number	%	Number	%	Number	%
0.1 – 2.0	131	81	56	75	187	79
2.1 – 4.0	22	14	12	16	34	14
4.1-6.0	8	5	7	9	15	7

Source: Calculated from Kasanga, (1998, Table 19).

Of those who still had land amongst the Mazingira survey respondents (Kasanga, 1998), 14% (16% of women and 6% of men) had land outside the locality. Unfortunately the survey did not specify the type of crop grown outside of the locality.

The results show that between 59% and 69% still have access to land under customary tenure, while 29% have to rent or sharecrop (Table 6.13). These data could have been affected by the presence of many in-migrants who would traditionally be more involved in sharecropping systems, but a look at the description of respondents shows that this is not the case (Kasanga, 1998, Table 11).

Table 6.13 Forms of acquisition of land by respondents in eight peri-urban villages around Kumasi

Form of land acquisition	Women		Men		Total	
	Number	%	Number	%	Number	%
Customary allocation	99	61	40	53	139	59
Gift	12	7	12	16	24	10
Cash rental /premium/hiring	30	19	10	13	40	17
Share cropping	17	11	11	15	28	12
Other	3	2	5	7	8	3

Source: Calculated from Kasanga (1998)

With the reduction in quantities of land available, the system of leaving land to fallow is in decline. The Mazingira survey found that only 74% of land holders still practised a fallow and this was most frequently for only one or two years. The survey shows that there is a notable difference between men and women (Table 6.14).

The farm types differed with level of urbanisation. In the urban village of Apatrapa, undeveloped building plots are used for farming, and food crops such as maize and cassava dominate. In the peri-urban and rural villages farm sizes could be up to 0.4 ha or more, but few owned more than one farm. 'Forest crops' are still produced in the rural village of Swedru, as are plantains, cocoyams and vegetables. In the urban/peri urban areas there are places unsuitable for construction, such as marshy areas and steep slopes.

Table 6.14 Prevalence and length of fallow among respondents in eight peri-urban villages around Kumasi, 1997

Fallow length (years)	Share of respondents using fallow (%)		
	Women	Men	Total
1 - 2	66	21	54
2.1 - 6	33	79	46
Respondents using fallow	78	64	74

Source: Calculated from Kasanga (1998, Table 19).

With the exception of the information available from the Kwabre thematic maps (Adam *et al.*, 1999), in the Mazingira survey no mention was made of the proportions of people with access to safe drinking water in urban, peri-urban or rural villages. There is, however, some information about the percentage of villages with piped water and boreholes from the VCS survey (Blake *et al.*, 1997b, p.2). Access to such facilities seems to be limited to those who can pay. Water quality analyses have shown that villages are under threat from the effects of river water pollution, as Kumasi is atop the watershed. These two factors combined reflect a real loss and threat to the health of the most vulnerable members of a community. This is demonstrated by the example of the village of Duase (8 km from Kumasi), where the stream, used by those unable to pay charges for water from the standpipe, is heavily polluted from the KMA area (Blake *et al.*, 1997a, p.31). It is clear from stakeholder analyses that no particular party is made responsible for or is able to deal with this threat (*ibid.*, p.22). There are examples

of local customs and laws that are designed to protect streams. At village level the unit committees are responsible for the maintenance of water and sanitation facilities and the women clean the water facilities and village dumps regularly. However, it is environmental pollution on a wider scale that needs more attention.

Although some information exists about the potential for fish farming (see Chapter 4), it is important to note the threat to existing fisheries from pesticide contaminated water. It seems that, even if borehole or piped water was readily available and affordable by everyone, water pollution has some negative implications for the sustainability of certain livelihoods such as production of irrigated crops and fish.

Urban villages did not appear to have water supply problems, while this was identified as an issue in 8% of peri-urban and 33% of rural villages in the VCS survey. However, these data are general, being reported by few key respondents, and does not describe differences in access to water between various groups in the communities.

There is little information on how poverty and livelihoods are related to changing access to common property resources upon which the poorest members of a community are most dependent. Most of the information available is about control and access to materials of increasing economic importance such as sand and stone, but also firewood and charcoal

When assessing the impact of urbanisation on the livelihoods of the poor, it is of interest to know the level of importance of these resources to the poor, the rate of decline of these resources and how the poor are compensating for this loss. It may be that the information exists within the data obtained most recently through the livelihood studies, but that these have not yet been sufficiently analysed to make them easily accessible.

Little timber is left in the Kumasi area (Blake *et al.*, 1997a, p.38), but it seems it is still available at least for the use of local people (Nkrumah *et al.*, 1998, p.63) from outlying villages such as Swedru (a rural village within the PUI). Timber access and control is described in detail in Holland *et al.* (1996a, p.48). Sand winning has increased with building activities and just under half of the VCS study villages (mostly within a 10 to 20 km radius of Kumasi) have sand winning sites (Blake *et al.*, 1997a, p.36)..

The increased commercial value of these resources has resulted in their exploitation by contractors and village chiefs, who have allocation rights. This is to the temporary advantage of village labourers, but to the permanent detriment of

the farmer who formerly used the land for production or fallow (Blake *et al.*, 1997a, p.37), and for the community as a whole who suffer from the eventual effects of environmental degradation and loss of access to resources that they need themselves. It was noted that in Swedru homelessness was not an issue (Anonymous, 1999a), because families were still able to rely on the traditional allocation of land and locally available materials (timber) and even family assistance in terms of labour for the construction of houses for new families.

Traditionally, people have the right to forage for common property resources wherever these are found. However, even in Swedru village people had noted the decline in fuelwood, which used to be available from the forests and fallow lands. Now it can only be accessed from family farm and fallow lands. The increasingly short fallow periods mean that the trees do not grow to produce good fuelwood. In Swedru people purchase fuelwood only to supplement what they are able to collect themselves, whereas in villages closer to Kumasi, either charcoal and/or firewood was bought.

There is an adequately detailed analysis of the market and production of charcoal and collection of firewood and its environmental effects in the baseline study (Anonymous, 1999a, p.65). Adam *et al.* (1999, p.133) presents the results of a study into fuelwood gathering and use in the Kumasi urban area. The results demonstrate the continued availability of some fuelwood in the urban area; from isolated wood lots, scattered trees in residential areas (often ornamental) and fallow lands in the periphery of the metropolitan area; low density residential areas were identified as having a large tree population.

The gatherers work in groups of about five and cover a circuit of about 3 km (on average) from source to source, spending between five and eight hours a day. They earn about 3,000 cedis per day as this is the average price of a head-load, but are not well considered by residents, who think they are responsible for thefts in their areas. 168 head-loads of wood were counted entering the market in Kumasi. The distance covered by gatherers is little compared with Accra, where fuelwood comes from as far as 200 km (Adam *et al.*, 1999, p.131). However, as pointed out in the survey, despite the continued importance of the tradition of cooking with wood, its supply is taken for granted in the urban planning process. If some consideration is not paid to its preservation and even creation in communities, the scarcity will result in higher prices, the income source for local gatherer-sellers will be lost and the market will be supplied from distant areas by those wealthy enough to have the possibility of transporting it. Already gatherers complain that

it takes a long time to find enough wood, it is rarely of the better quality, there is a lot of competition and access can be prevented to trees on private property.

The results of a set of family case studies (Nkrumah *et al.*, 1998) demonstrate that some other resources like snails, leaves and mushrooms are still available despite the intensification of land use and ownership, although it is expected courtesy to ask permission to go on other people's land. There appears to be a bush meat market (Adam *et al.*, 1999, Thematic map 1, p.6-7), but no other information is available.

No information was found about hunting rights or quotas, or the markets for bush-meats, fruits, palm wine, honey, or other such possible sources of incomes. Neither was there any indication of the current levels of exploitation of these resources or their location in relation to Kumasi, with the exception of fuelwood and charcoal, sand and stone.

Social capital

The impact of urbanisation on social cohesion has been well outlined in Blake *et al.* (1997a, p.52). The trend away from the traditional community spirit traditionally promoted by the chieftaincy was well described by respondents from the village of Duase (peri-urban Kumasi): "individual development has succeeded communal development". This has been attributed to changing loyalties to the chief and increasing differences between the rich and poor (*ibid.*).

Loyalty to the chief is reportedly eroded firstly by increased numbers of 'strangers' (e.g non-indigenes) in the community, who are only bound to the chief by payment for a plot of land; they do not depend on the village for livelihoods or markets, have less input in community activities and more input into the outside community such as the church instead of traditional groups. And secondly, amongst indigenous peoples, loyalty to the chief is degraded by disputes relating to the sale of land and disposal of proceeds.

The relevance of the proximity of the residence of the chief to the village and the regularity of his visits was made in the VCS (Blake *et al.*, 1997b, p.2), as was a comparison between the ratio of in-migrants to indigenous people between urban, peri-urban and rural villages.

Attempts at researching and describing the relative survival and importance of the family social network have been made in the livelihood studies (Nkrumah *et al.*, 1998; Anonymous, 1999a), but once again it is difficult to obtain all of the information that could be available before a more comprehensive analysis is made. The strength and value of the extended family network between rural, peri-urban

and urban and even wider afield should be determined from the family case studies already made.

After interviewing the homeless in the KNRMP study villages it was suggested (Anonymous, 1999a, p.17) that urbanisation causes a breakdown in the extended family system as a result of the inability of parents/ family heads to provide for basic needs. Traditionally a family bond situation is created by the knowledge that family lands are held in trust by the heads of families on behalf of the families. As these lands are lost to development, the bond is degraded. Young people can no longer depend on inheriting family lands. Overcrowding of family accommodation results in young men sleeping rough. Some young women in urban areas resorted to living with boyfriends, when their families could no longer cater for them. The fact that only one of the 11 homeless people interviewed was indigenous indicates that to a large degree there is still a great deal of support between family members, and that the housing and land situation is most adversely affecting those without family in the area.

The importance of connections in the city and elsewhere for finding occupations and living space for young women and men has been indicated in several of the family case studies.

The study into CBOs (Anonymous, 1999b) found that all villages had Unit Committees and Women's Groups based on religion. Other locally based groups differed in their objectives according to location. In the more rural area, the groups were agriculturally orientated (marketing and improving production). In the more urban groups, the objectives were welfare and development inclined, assisting the members in times of need, income generation activities, organising communal labour (de-silting drains and weeding) and sometimes acting as pressure groups on abuses on land use planning. In some villages trade associations provided "support" for the members when needed though there is no specific information in the surveys about what kind of support this consists of, nor by which means it is provided.

The functions of the most basic level of local government, the Unit Committees (UCs) are reportedly weakened by under-funding. The UCs have the power to collect revenue and resources from the community. Low education levels and an inability to co-ordinate efforts to strengthen their operations were also reported as one of the common constraints for CBOs. Links among CBOs and between CBOs and outside organisations (e.g. MOFA extension department) are stronger and wider in urban areas as compared to rural areas. Information flows may be less fluid as a result. The increasing interest of the churches in village

development (with the increasing numbers of wealthy strangers in the congregation) and with their increasing interest in land should not be overlooked in terms of how much they can organise and contribute.

There is little information on the potential for church involvement in projects, or the experiences of CBOs and NGOs in different areas of intervention that may be of value to developing pilot projects and future strategies. The same could be said for the potential contribution of traditional leadership, but it is probable that this will vary quite significantly between villages and should be explored more deeply when the specific need arises.

Human capital

There has been no research into education levels, possession of skills, or access to schooling or training commissioned by the KNRMP, but some information is available in Kasanga (1998, Table 11) presented as characteristics of survey respondents. This details the proportion of respondents who had obtained each of the different levels of schooling, the levels of English comprehension and the difference between gender and marital status. According to these data, 77% of women and 45% of men can neither speak nor write in English. It was interesting to note that 20% fewer married men were illiterate than single men, whereas there was no such clear difference between married and single women. This may be due to the fact that an education makes men more eligible for marriage, and/or because most of the single men were younger, and rates of education may have dropped in their generation due to decreasing ability of their parents to pay.

The livelihood studies have indicated the lack of education and skills amongst the poorest groups, and the fact that this is a major impediment for accessing adequate alternative livelihoods when land is not available to go into farming. For example, out of 11 homeless people interviewed only two were educated to middle school and one had completed training as a cobbler (Anonymous, 1999a).

No information was found on the changing prevalence of diseases related to pollution or changing occupations or diets or on how the general health status of communities has varied with differing degrees of urbanisation.

Physical capital

Several examples were found amongst the family case studies (Nkrumah *et al.*, 1998) of those who were unemployed due to lack of funds to initiate business or trade. This was the case even for those with a higher level of education or

training in a specific skill. Three of the homeless people interviewed had experienced loss of livelihood options through lack of tools (for carpentry and cobbling). This problem has also prevented respondents from obtaining or completing their apprenticeships.

Data were collected for the Mazingira study on the ownership of household productive assets (share of respondents owning livestock, domestic electrical equipment, motorised transport, plough, cart, and ox) (Kasanga, 1998, Table 20) in peri-urban Kumasi. There was no indication of the sale of assets as a result of increasing financial stress.

Overcrowding is prevalent, with as many as 15 people sharing a room even in Swedru, where housing construction was deemed to be less of a problem due to continued access to land and building materials. Even for the relatively wealthy owner occupiers, rooms are shared out between members of the extended family, with the result that they also have only one room for their immediate family. The baseline survey (Holland *et al.*, 1996a) shows that in tenement buildings there are 40 to 100 people per household, with 20 to 50 people per household in indigenous housing.

Table 6.15 Perceived benefits of urbanisation among respondents in eight peri-urban villages around Kumasi, 1997

Perceived Benefits	Share of respondents (%)
Social amenities	44
Electricity	36
Hospitals	16
Employment	15
Markets	13
Transport	8
Schools	5

Source: Calculated from Kasanga, (1998, Table 19).

As Table 6.15 suggests, access to infrastructure and facilities were the main benefits perceived to result from urbanisation by respondents in the eight village Mazingira survey (Kasanga, 1998).

The value and importance of electricity was repeated in the family case studies, as many respondents were hoping that their village would be connected up

to the network. Access to safe drinking water was not mentioned by survey respondents, despite the frequently mentioned widespread threat of pollution arising from the fact that Kumasi lies on the top of the watershed. Water analysis carried out in one of the peri-urban villages shows that it is of unacceptable quality by local and international standards (Kasanga, 1998, p.134).

Some village leaders have managed to attract these facilities to their villages using the revenue from land sales, e.g. Emena village where the queen mother and the land allocation committee have attracted a widely renowned hospital, electricity supply and pipe borne water. However, the reporter noted that the adverse effects of the permanent loss of family lands on the livelihoods of the community appear to outweigh the benefits of gains in terms of infrastructure and facilities

Access to electricity and water supplies is described in Blake *et al.* (1997a, p.45). Access is not so much related to proximity to Kumasi, as to the willingness and ability of the chief to invest in the infrastructure and connection charges.

The share of villages with schools of various levels and health facilities is also reported, and this does not appear to be related to proximity to Kumasi either. The provision of education facilities is regarded as priority by villages and district committees alike. Sixty-seven per cent of villages had ongoing school construction projects at the time of the VCS survey (Blake *et al.*, 1997b, p.209).

The studies have also described access to transport and markets (Blake *et al.*, 1997a, pp.86-88; Holland *et al.*, 1996a, pp.43-45) and their operation. As a focal point of transport routes (road and rail) in the country, Kumasi is well supplied from outside of the region, by areas with competitive advantages for the production of less perishable commodities. Perishables or bulky crops still tend to be supplied from within the Kumasi area.

Only 3% of the villages in the VCS were not on a motorable road, and 76% were on managed tro-tros routes (local buses) and benefited from taxis services. The 12 tro-tros routes are regular although five have some flexibility according to changing demands (e.g. market days). For each route tro-tros charge a fixed price (200-250 cedis) whatever the length of the journey, as compared with taxis or trucks, the costs of which were related to distance travelled. The average cost of transport to Kumasi varied between the three village clusters identified in the inception report (Blake *et al.*, 1997a, Table 14, p.49).

The marketing of food crops in Ghana is characterised by a large number of private independent traders and large marketing firms and public sector marketing

is rare. The existence or feasibility of co-operatives or producer group market associations and the associated efforts of individual farmers (or groups of) trying to gain marketing advantages has not been explored. However it seems that, following a long tradition of trade the Asante have a well organised local and regional market system. Markets are highly structured, with a variety of market associations concerned with the marketing of different produce. A queen mother who is elected by the association members for the purpose of maintaining order, including the fixing of prices heads each these.

The central market of Kumasi acts as a major consumer and relay market for Ghana and West African trade. Market queens were consulted about the daily interactions between the central market and the areas surrounding Kumasi. There are villages visited by Kumasi traders on a daily basis for the collection of produce to take to market, and vice versa, village traders who go early to Kumasi in order to bring back perishables (meat, fish) and imported items to sell in the villages by 9 a.m. Within a distance of about 16 km villagers transport their own produce to Kumasi, whereas further afield they wait for traders or wholesalers to visit them. There was mention that some of the village markets closer to Kumasi have started to shrink as producers, traders and consumers become increasingly reliant on the bigger markets in Kumasi. Most farmers prefer to take their products to Kumasi themselves in order to take the opportunity to make their own purchases. They can also obtain cash advances from the traders they deal with there. Arrangements are sometimes made between farmers who contract local traders to sell their products for a fee, like an agent. They do the harvesting and loading and the trader uses her knowledge of the market in order to maximise the returns.

According to the KNRMP participatory rural appraisal research, none of the peri-urban groups interviewed reported any problems with marketing; they were confident that whatever they produced they could sell. Only in one village (rural Amaadaa) was marketing raised as a major problem. Produce had to be head-loaded at significant cost (500 cedis compared to 250 cedis to get to Kumasi by truck) from the market to the road to meet traders, who came twice a week only after being invited. They didn't always manage to sell all their produce. The main problem in Swedru (15 km from Kumasi) was that in times of gluts, there were no storage or processing facilities, and this forced them to sell at very low prices at harvest (Blake *et al.*, 1997b, p.20-116). Another village, Nyameani (30 km) had to sell fresh fruit such as oranges at very low prices to middlemen due to their perishable nature.

When considering the need to develop further enterprises available to poorer people in order to increase employment alternatives or supplements to agriculture, then information about developing the market for specific commodities becomes increasingly relevant.

It may be noted that in the reviewed reports there is a lack of information firstly on the feasibility of developing new products based on adding value to (processing) resources available (e.g. producing cheese, butter, yoghurt, refined honey, dried or sugared fruits, peanut butter, fruit juices, dried or tinned tomatoes, jams, chutneys). And secondly, on altering the market strategy through the development of marketing/production associations, developing storage facilities to allow people to take advantage of seasonal price differentials, and cold chains for transport of perishables.

Some mapping of the main source of products sold, price differentials over seasons and between market locations would provide a useful tool. It would also be useful to determine the processing and storage practices already carried out or tried and the potential for the processing, storage and marketing of each different commodity type.

Financial capital

In the baseline survey (Holland *et al.*, 1996a, p.21-22) a lack of finance and credit was reported in all the villages visited as a constraint to use of agricultural inputs and to diversification out of agriculture to other occupations or small businesses.

The importance of the informal financial institutions compared to the formal has been recognised, and the characteristics of the former have been described, and include 'susi' groups and traders. Research into the financing of small businesses has demonstrated the importance of people's own savings, or gifts or loans from relatives or friends in finding start-up funds. Gifts and loans from family to begin small enterprises were also frequently observed in the family case studies (Nkrumah *et al.*, 1998). The success or otherwise of formal NGOs or CBOs to provide credit in the areas have not been described. The impact of changes on livelihood strategies and options

Urban expansion and the associated changes from farm occupations to non-farm alternatives have a number of consequences for the livelihoods of the peri-urban poor. Blake *et al.* (1997, p.39) describe the various push and pull factors influencing those who abandon farming, thus providing a useful summary of the impact of various findings discussed earlier (cf. Table 6.16).

Factors which push and pull people out of PUI farming have been identified (Blake *et al.*, 1997a) and are presented in Table 6.16. Farming is decreasing as a means of livelihood (Blake *et al.*, 1997b). Something is known about those who move out of farming and how they take up alternative occupations (Blake *et al.*, 1997a). In general, young people, especially women, try to move out of farming as it is seen as unattractive and of low profit (Blake *et al.*, 1997b), either from families with no land to give them as inheritance, or those who choose to leave for more lucrative options (Kasanga, 1998). If individuals or their family have capital, they can acquire skills through training or apprenticeships and tools and start their own trade. If they are educated and have the necessary contacts they may find a city job. Otherwise they must depend on the less reliable sources of casual labour. The reported types of casual labour have been construction labour, farm labour and much less so, factory work. Except for the latter, these cannot be considered sustainable with regard to the rate of land use change and the patchy and temporary nature of building development. Duase is an example of a village where construction has been halted due to litigation, and people were looking forward to the end of this so they could regain their jobs. High youth unemployment is reported, even for those with an education.

Those remaining in farming may include women who cannot get out and who are stuck in poverty (Blake *et al.*, 1997a). Women tend to lack the resources to cope with the lack of available fallow land, and rather than attempt intensification, they are wringing the last fertility out of the soil, before giving up (Kasanga, 1998, p.68). But some men remain in farming carrying out opportunistic cropping on yet undeveloped plots or by virtue of sharecropping agreements in a neighbouring area (Blake *et al.*, 1997a). The decline in food cropping by women for household food may have an impact on household responsibilities to provide food (Blake *et al.*, 1997a).

Others who stay in farming tend to be specialist producers with enough capital to invest in profitable options or those who have so little in terms of assets that when their land is taken from them; they will have little alternative but to go into sharecropping arrangements in neighbouring villages, or crop verges or other waste-land in order to obtain a food supply.

Figure 6.2 shows the impact of the reduction in availability of land on the alternative livelihood choices of farmers and their families according to what assets remain available to them. This analysis is based on Blake *et al.* (1997a, p.39), but Kasanga (1998) has provided data (described below) which can be considered in relation to the various lines of impact indicated in the figure.

Table 6.16 Factors behind shifts away from farming in peri-urban Kumasi

Factors pushing people out of farming	Factors pulling people away from farming
Low crop productivity resulting from increasing infertility with loss of fallow, (and a reluctance to invest in the land due to insecure tenure).	Perceptions of higher rates of return from alternative occupations
Removal of farm land (landlessness or near landlessness)	Possibility of commuting
Higher labour costs (due to higher costs of living)	Non farm jobs give immediate cash*
High transport costs for low value bulky goods (e.g. cassava)	

Source: Blake *et al.*, 1997a

The information provided by those who had lost land (or whose family had lost land) on how they were coping (or compensating for lost revenue) in most cases reflects the data on occupations (cf. Table 6.17). The high proportion (25%) of both men and women who were increasingly dependent upon relatives, and who had no alternative livelihood open to them at that time reflects the high level of unemployment and the lack of opportunities discussed above.

Equally important was the category “Others” which probably represents the mixed artisans and craftsmen (hairdressers, seamstresses, barbers, cobblers etc), although this definition is not made clear in the report. The importance placed on these options is re-enforced by the number in training for professions or skills, particularly the proportion of single people (24% of single women and 21% of single men).

Of those in training, 80% of the women were single and 20% married, compared to men, of whom 50% were single and 25% divorced/separated. This can be attributed to the fact that fewer people can pursue training when they are constrained by domestic responsibilities into which they must invest their time, energy and other resources, whereas the other options provide them with some immediate income. This is probably the main reason why there is such a difference between the proportions of men and women in training. By far the majority of the women carry out trade or crafts as their non-farm alternatives (especially married women: 28% and 33% respectively), while many men were in construction work (11%).

Table 6.17 Strategies used by people to cope with loss of land in peri-urban Kumasi (number of respondents in eight villages)

Coping Mechanism	Women		Men		Total	
	N	%	N	%	N	%
Acquisition of land/ Share cropping	21	13	5	7	26	11
Job hunting	3	2	3	4	6	3
Training in skills or profession (of which single people)	10	6 (80)	12	16 (50)	22	9 (63)
Out migration*	1		1		2	1
Business/trading/petty trading	40	25	7	10	47	20
Construction	3	2	8	11	11	5
Dependence on relatives / nothing	40	25	18	25	58	25
Others	42	26	19	26	61	26

- The likelihood of meeting people who have had to leave the area looking for work is obviously slim hence the low representation here
Source: Derived from Kasanga (1998, Table 13).

Farming was such an essential livelihood source for many (11%) that they were pursuing the same occupation to replace the fields they had lost. This may have been the opportunistic use of verges or empty building plots, sharecropping (4%) or renting land. This option was more important for women than for men.

The family case studies (Nkrumah, 1998) reported that, of the 14 family heads interviewed, only two had left farming, confirming the above findings in Kasanga (1998). However no such useful summary calculations were carried out for the rest of the family, so that although we know that the heads of families tend to still have farms, we cannot see the difference between them and their sons, daughters and grandchildren. This information may be available in raw form, but unless several hours are spent condensing and classifying the information in some 60 interview narratives in order to make the information more accessible it cannot possibly be used in the discussion.

Looking in a more structured way at these family (and also household) case studies in future stages of the project may help determine more objectively issues like:

- The different responsibilities and burdens experienced by different household members.

- The difference in livelihood strategies and options between members (according to age/generation, gender).
- The extent to which families support each other in developing their livelihoods (credit, farm land, education).
- Longer term strategies for developing a better livelihood; for example, do young people who go into vegetable production or even unskilled labour with the hope of earning enough money in the short to medium term to be able to invest in training and/or starting-up their own trade?
- Levels of diversification of income on an individual level and a family/household level.

A few differences in livelihood strategies between the three types of village, urban, peri-urban and rural where described in the participatory rural appraisal (PRA) results (Blake *et al.*, 1997a, p.5). Dependence on agricultural livelihoods is higher in the rural villages, and daily commuting to Kumasi is more common in the urban and peri-urban villages but becomes rare in the rural villages at about 30 km from Kumasi. The PRA summary enumerates the widest range of non-farm income opportunities found in the literature so far. In the dormitory town of Abuakwa a sawmill, grain mills, block-making sites, a distillery, a chemical formulation plant, and poultry farms were identified as depending on the Kumasi market, whereas 'kente' weaving was the only industry mentioned for the two more distant (30 km) rural villages, the remainder of income generation activities identified depending on specialist agricultural or horticultural production. According to the PRA summary each settlement seems to have its own individual pattern of livelihood strategy adaptations to the peri-urban environment but the reasons for this were not suggested.

Fuelwood gathering was mentioned in the section on Natural Capital above. The gatherers are mostly women (92%) of 19-59 years of age, of low education status (85% illiterate), and have either no other form of employment (85%) or are employed in poorly paid jobs (15%). It seems that fuelwood is a source of revenue for many people, 120 having been found and interviewed for the survey carried out by the project. No extrapolation of this figure was attempted in order to estimate the approximate number of people depending on this for a livelihood in the Kumasi area, but it may be assumed that it is a significant number. As was pointed out earlier, intensive use of the wood sources in the city and peri-urban areas will, in the absence of control and regeneration activities, result in the loss of this form of livelihood, and in higher fuel prices for the residents.

Increasing vulnerability of the poor

Even those with land feel the need to pursue better livelihood options as productivity declines and land tenure is increasingly threatened. Those with the means can pursue lucrative alternatives, but many are left impoverished, either unemployed or with “un-remunerative employment” (poorly paid employment or unprofitable farming activities) that may not even allow them to meet their basic needs. Kasanga (1998, Table 14) shows that many people have recognised poverty (42%) and general insecurity (10%) as adverse effects of urbanisation, whereas only 2% think urbanisation results in increased incomes. An increase in divorce and teenage pregnancy rates were reported as resulting from increased urbanisation by 12 and 22 of respondents, respectively.

That villages experienced a marked sense of personal insecurity as a result of changes becomes evident in the frequency of responses recorded in Table 6.18. Men and women who reported having suffered from food shortages numbered 60% while 73% reported an inability to meet the basic needs of the household or even to support it.

Table 6.18 Indicators of insecurity resulting from changes in peri-urban Kumasi (number of respondents in eight villages)

Indicators of insecurity* suffered personally	Women		Men		Total	
	N	%	N	%	N	%
Inability to meet basic needs	238	74	110	69	348	73
Unable to support household	243	76	105	66	348	73
Food shortage	196	61	91	57	287	60
Unemployment	187	58	75	47	262	55
Un-remunerative employment	104	32	51	32	155	32

* Insecurity of livelihood, i.e. vulnerability
Source: Derived from Kasanga (1998, Table 16).

The rising cost of living indicated by increasing rents with proximity to Kumasi has been described, as has the problem of overcrowding. Homelessness is a difficult issue to discuss or describe due to varying definitions used. Kasanga (1998) describes it as “those who do not have a roof of their own” or “have to beg to sleep in others’ houses”. This excludes “rough sleepers”, who were the ones included in the homelessness survey (Anonymous, 1999a). Disregarding those

data which are difficult to compare, and certainly in term of scale of homelessness is vastly different, we can still conclude that urbanisation has promoted this and other social problems. The cause of homelessness is said to be due to the high rents and people are known to move away from the city to become commuters in order to obtain lower rents. However it must also be due in part to the change in the availability and access to land and other natural resources that would have traditionally been given to new families for the construction of new homes, leaving them to share space with their families. The higher costs of living in general were reported by 66% of people in the peri-urban area (Kasanga, 1998, p.89).

Pointers for future research on sustainable livelihoods in peri-urban Kumasi

The review of available documentation shows that the livelihoods of the poor have by and large been adequately characterised. It must be borne in mind that a sustainable livelihoods framework such as that outlined at the beginning of this chapter was not in place when the research programme was initiated, but was introduced well into the research process. However, some gaps in our knowledge remain which may have to be filled before future intervention strategies are drawn up to protect livelihoods and promote sustainability in peri-urban Kumasi.

Gaps remain in some areas such as a more systematic comparison between Kumasi and other cities in terms of land use change and employment trends. Chapter 2 documents the case of Accra, Ghana’s capital city, which offers some lessons that may be applicable to Kumasi. This exercise may be extended to other similar case studies. As is also evident from the case of Accra, basic and reliable information is needed on the shifts in the proportion of village populations with and without access to clean water and sanitation facilities, as well as other amenities such as electricity and health services; changing prevalence of disease associated with contaminated water and poor sanitation, as well as other forms of pollution; the proportion of households of urban, peri-urban and rural communities able to send children to school (this is necessary to indicate the positive impact of increased availability of facilities while weighing it up against increased poverty preventing access of children from poorer families).

At the household level it may be useful to examine a range of questions such as: who in the household/family makes decisions over the disposal of land if consent is sought from household/family level? How do the responsibilities change within the household with urbanisation particularly considering the increasingly cash orientated household economics? Gender analyses are required, rather than a

collection of data for a sample survey that stratifies response by gender and marital status. These answers may be used to confirm or reject a pre-conceived hypothesis, but they do not really allow us to understand the relationships and differences in access and control over assets within a household. Also how these factors differ between households according to wealth levels and how they are influenced by urbanisation is not made clear.

Similarly, lack of capital and/or skills in a trade were identified in the documents reviewed as barriers to sustainable employment but current systems for the provision of these were not explored. There is little on availability and access to credit, the successful or otherwise experience of CBOs and NGOs in providing credit, and attitudes towards credit for peri-urban enterprises. There is equally insufficient detail of actual and potential income generation activities from natural resources in the peri-urban interface, of the actual and potential contribution of larger scale industries or non-NR activities (engineering, mechanics, IT) and of the potential to improve incomes from improved marketing strategy.

In general, as was pointed out in chapter 2, it would be desirable to look more closely at the recent development of the peri-urban job market in the context of the regional and city economies. Further study should identify more examples of such local industries as described in the PRA, and determine the factors necessary for their initiation, success, their constraints and likely future. How many they employ, what skills are needed, and how jobs are accessed will also give more information on the potential for non-farm employment options for the poor. They will often be based on natural resources available locally and so may still be considered within the remit of the programme. Indeed the identification and testing of value added processing of agricultural produce was listed as a researchable theme in the inception main report (Blake *et al.*, 1997a, p.72), but if this has been done no report has been seen. There is little reason why a natural resources programme should restrict itself to agricultural products; many crafts and small industries are based on non-food crop natural resources, such as leather working.

Notes:

1 For an adaptation of the framework to urban areas, see Meikle *et al.* (2000).

2 All land available for cultivation, including fallow land not cultivated in the last five years, grazing land and permanent pastures, and land under miscellaneous tree-crops, including thatching grass, bamboo bushes and other groves.

3 Until 1998, Dharwad District had 17 talukas, or sub-districts. In 1998, the District was divided into three new Districts, and Dharwad now has only five talukas.