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Further knowledge of livelihoods affected by urban transition, Kumasi, Ghana

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Peri Urban Interface

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Summary

This report sets out the activities and key findings of a research project that aimed to generate new knowledge to fill gaps in existing knowledge bases on natural resource management in peri-urban Kumasi, particularly relating to the livelihood strategies of the poor.

The research was conducted in two Phases, reflecting the need for further analysis of existing databases and reports and the need to ensure that any further fieldwork was fully justified and useful for further phases of research under the NRSP Peri-Urban Interface Production System. Phase 1 was undertaken between September 2000 and January 2001, and fieldwork in Phase 2 from February to May 2001.

During Phase 1, further analyses of data were undertaken in four main areas: agricultural systems, land transactions, GIS/remote sensing and poverty and livelihoods. Most of the new information generated in Phase 1 related to a better understanding of poverty and livelihood strategies, as the analysis in this area was able to draw on previously unanalysed data sets.

The key findings include:

- Much land once used for agriculture has been lost to housing in all the villages studied. The extent of loss was quantified in four villages, though the time period of the loss is not given. Upland is particularly being used for housing, with implications for growing staple food crops, leaving valley bottoms for cropping.
- Intensification of cropping can be observed mainly in the valley bottoms, with vegetable, sugarcane and taro crops, carried out mainly by men of all ages. Shortening of fallow periods has been reported, which is a form of intensification, though this effect may not be exclusively due to urbanisation.
- There is a diversity of land transactions taking place, with complex negotiations resulting in a range of sharecropping, renting and leasing arrangements. The nature of the arrangements is affected by urban influence, with more sales (and higher prices) and temporary borrowing observed in villages closer to Kumasi.
- The complexity of land transactions reflects the complexity of family relationships, and such transactions may be further complicated by changing livelihood options due to urban influence-
- The implications of increasing land 'sales' for housing development for livelihoods are not always clear, as insufficient information has been collected on how people respond to the loss of access to land for farming.
- The lack of consultation on which plots of land are sold and the inadequacy of compensation are key issues in the management of land at village, household and family levels.
- Non-farm occupations amongst the poor/est are prevalent in peri-urban villages, particularly trading, mainly amongst women, and construction and manual labouring amongst men. Most of these job opportunities are in Kumasi, rather than in the villages, leading to increasing levels of daily commuting.
- Farming has shifted from being a major to a minor occupation, especially for the younger generation.
- The poor/est were also characterised in previous research by their lack of access to key assets and social infrastructure, with variations between villages, reflecting access to, and influence from, Kumasi.

The analysis confirmed that there are observable trends towards a greater diversification of livelihood strategies, especially for young married people. A range of
factors are involved in explaining this, including more opportunities for vocational training and employment beyond farm work and less access to land for farming.

The analyses did reveal, however, that there are limitations to the use of the existing data, due to the types of questions asked and the informants used (in the VCS) and the activities undertaken. This is largely due to the focus of previous projects on increasing productivity (as required in the initial terms of reference), rather than improving natural resource management so that it provides benefits for the poor.

The research in Phase 2 therefore focussed on generating better understanding of the role of natural resources in the dynamics of livelihood strategies of the poor in relation to other resources and on the understanding of related processes of decision-making at individual, household, family and village levels.

Considering livelihood strategies, fieldwork to a large extent corroborated the findings of previous research, confirming that people have different livelihood strategies, opportunities and needs based on gender, age and village context. The younger generation tend to have a preference for non farm based livelihoods; older women for agriculture. There is a trend towards diversification of income generation activities, but limited alternative job opportunities for the poor. There is a shift from NR based livelihoods to non NR based livelihoods, or a combination. However, a key finding was that non NR based activities require high human and financial assets – training, skills, finance and credit, thus limiting people's ability to escape from poverty if they were low on these assets.

The research also found that there is an increased sense of vulnerability, engendered by current poor macro-economic conditions – inflation, declining economic status and unemployment. Within the local context, vulnerability was increased by loss of land, this being identified as cause of poverty by older age groups, both men and women. Farmers in areas demarcated for housing development have less security. Other factors identified were perception that rainfall patterns are changing and there are changes in social structures leading to loss of support through the extended family. The most vulnerable groups were found to be the elderly, single mothers, widows, sick or disabled. Poverty was particularly associated with ill health, unemployment and loss of assets.

Within the peri-urban context, the characteristics of vulnerability appear to err towards the urban rather the rural, with economic change outweighing environmental considerations. An important feature in the peri-urban interface is, although relevant in both rural and urban settings, lack of access to decision-making, and lack of control over events that shape livelihoods are fundamental to the process of land loss affecting the poor in peri-urban areas.

Many people still obtain a large part of their livelihoods from natural resources. Many reported a decline in agricultural productivity, relating to soil fertility, with associated changes in cropping patterns towards cassava in

particular. Closer to Kumasi, there is considerable loss of agricultural lands to housing development, with a consequent decline in farmed area. There are high opportunity costs for NR based activities. Constraints to agricultural production include cost of labour (high in relation to the value of outputs), insecurity of land tenure and costs of inputs.

Land is the most contested asset in the peri urban areas. Land allocation mainly rests with traditional authorities; and the poor have little power to contest this. One encouraging sign is that traditional authorities are initiating moves toward installing more equitable principles of land management by the chiefs. People that wish to remain in agriculture are acquiring farms further away from the village, to ensure more long term security of occupation.

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Abbreviations

ADP	Aerial digital photography
CEDEP	Centre for the Development of People, Kumasi
GIS	Geographical information systems
KMA	Kumasi Metropolitan Assembly
KNRMP	Kumasi Natural Resources Management Project
KUMINFO	Kumasi Information System
LCMC	Land Conflict Mediating Committees
NR	Natural resources
NRI	Natural Resources Institute
NRSP	Natural Resources Systems Programme
PRA	Participatory rural appraisal
PUI	Peri-Urban Interface
PUK	Peri-urban Kumasi
UPA	Urban and peri-urban agriculture
UST	University of Science and Technology, Kumasi
VCS	Village Characterisation Survey

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1. BACKGROUND AND PROJECT PURPOSE

1.1 Introduction

Interventions to contribute to the sustainable improvements of livelihoods require detailed knowledge and understanding of household (and intra-household) livelihood strategies. Although much information has been generated to date about the livelihood strategies of the poor in peri-urban Kumasi, project R7549 recommended that this knowledge is not entirely adequate for moving to the next phase of developing pro-poor plans of action for natural resource management in the peri-urban interface.

This project was commissioned in light of the more strongly articulated focus of the Natural Resources Systems Programme (NRSP) on the need for research to explicitly aim to benefit the poor. This requires a good understanding of who the poor are and the many aspects of their livelihood strategies. The project builds on existing knowledge of livelihoods and focuses on how livelihood strategies have changed as a result of urban influence.

The project was undertaken in two Phases, reflecting the need firstly for further analysis of existing databases and papers and prior to any further fieldwork, to ensure that it was fully justified and useful for further phases of research under the NRSP Peri-Urban Interface (PUI) Production System. This report sets out the activities and key findings of Phase 1 of the research, conducted from September 2000 to January 2001, and Phase 2, which consisted largely of fieldwork conducted from February to May 2001.

1.2 Purpose of the research

The stated purpose of the research is:

New knowledge base created to fill any critical gaps in existing knowledge bases for use in developing pro-poor plans of action

New knowledge has been generated for each output of the research as set out in Chapter 3. In addition to generating further knowledge, Phase 1 was also concerned with refining thoughts on what fieldwork should usefully be undertaken in Phase 2. The review of existing information led to the identification of a range of issues for which further knowledge could usefully be generated, and this informed the research undertaken in the second phase. It was the constant concern of the team that that any further knowledge generation should be useful for development of action plans for natural resource management that benefit the poor.

The overall goal of the NRSP PUI is

Natural resources management strategies for peri-urban areas which benefit the poor developed and promoted

The team, therefore, adopted an integrated approach to Phase 2, building on the better understanding of the livelihood strategies of the poor generated in Phase 1. The research in Phase 2 focussed on generating a better understanding of changes in land use patterns, the role of natural resources in the dynamics of livelihood strategies of the poor in relation to other resources and on the understanding of related processes of decision-making at individual, household, family and village level.

2. RESEARCH ACTIVITIES

The research was conducted in two phases. The approach of undertaking phased research resulted from a recognition that a large volume of data had already been generated, much of which had not been exhaustively analysed, particularly with respect to the implications of change for the livelihoods of the peri-urban poor.

2.1 Activities in Phase 1: September 2000 – January 2001

Existing information was further analysed and assessed against criteria associated with the outputs defined for the project. This first phase involved orientation at the Natural Resources Institute, which holds KUMINFO and most of the data sets, a meeting at Silsoe College, Cranfield University, to explore how the ADP imagery can be used to identify land use changes, and intensive data analysis. Five Ghanaian researchers, who were involved in the peri-urban research in Kumasi, were invited to the UK and spent up to four weeks assisting with the analysis.

The team worked in four areas - land transactions, agricultural systems, poverty and livelihoods and GIS/remote sensing – and interacted and met at regular intervals to ensure that the work was closely integrated and that information and knowledge shared. Each team worked on existing information from previous research in Kumasi. Most of the existing information comes from the Kumasi Natural Resources Management Project (KNRMP). The data sources used included:

- 1995 baseline studies
- 1997 KNRMP participatory rural appraisal
- 1997 KNRMP village characterisation survey
- 1998-9 KNRMP socio-economic studies (including family case studies)
- Other KNRMP project reports e.g. urban natural resource studies and urban gaps study
- R7330 watersheds project reports

Much of the analysis focused on the four villages that had been the subject of the socio-economic studies. Table 2.1 shows the data sources available for the four villages.

Table 2.1 Data sources for the four villages

	1995 Baseline Studies	1997 PRA	1997 VCS	1998-99 socio-economic	1997 ADP
Duase	❑	❑	❑	❑	
Aburaso	❑		❑	❑	❑
Apatrapa			❑	❑	❑
Swedru		❑		❑	❑

Some specific points regarding methodology in each of the four areas covered by the research are set out below. The research team decided against the original plan of convening a workshop in Kumasi in January 2001 because of the interim nature of the findings and the need to allow sufficient time and resources for planning the research activities of Phase 2 with the Ghanaian team.

2.1.1 Land transactions

The analysis of data largely consisted of drawing on existing reports and papers, particularly those arising from the KNRMP, but also some further analysis of data collected in the KNRMP Village Characterisation Survey (VCS) and the planning database. Additional material on land tenure and land access in Ghana and elsewhere in West Africa was also consulted. The analysis of existing data sources from the KNRMP was limited by the types of questions asked during surveys and semi-structured interviews conducted in that project. In the VCS, for example, data on changes in land tenure were recorded in terms of whether the amount of land available for different uses and land ownership had changed since 1983. Change was recorded in terms of whether the land area had decreased, increased or whether there had been no change. No quantification of the land area under different forms of ownership was carried out, making an assessment of the change difficult. Information on the availability and price of housing plots was also recorded. Although other activities generated information on land transactions (particularly specific land tenure studies), it was generally the case that the information did not make explicit linkages to the livelihood strategies of the poor. It is not, therefore, possible to go beyond making general observations on the types of land transactions that take place and the implications of these for the livelihood strategies of the poor.

2.1.2 Agricultural systems

In addition to the KNRMP data sources set out above, other literature on agriculture in and around Kumasi, including other projects' reports and generally on urban / peri-urban agriculture were consulted.

Mr. Patterson Osei-Bonsu, a Ghanaian researcher, produced a summary report at the conclusion of a one month visit to UK. For the most part the analysis consisted in a literature review in which the issues identified initially by the researchers were cross-checked between the literature sources available. Some use was also made of the interrogative functions of the KUMINFO GIS.

2.1.3 Poverty and livelihoods

The approach taken to characterising poverty within peri-urban Kumasi was to reinvestigate the survey data and reports written under the KNRMP (R6799) to clarify whether or not it was possible to get a fuller picture of the poor across peri-urban Kumasi. This centred around a review of existing qualitative and quantitative data.

The focus of livelihoods analysis under Output 2.2 of this project was on patterns of access to capital assets and the livelihood strategies of different gender and age groups in urban, peri-urban and rural villages. Two main sources of previously unanalysed data were used; the family case studies (typescript of field notes) and the household survey (in Access data base). The family case studies contain detailed interviews with all adult members of extended families, selected across different wealth categories, with the purpose of exploring their livelihood patterns and linkages. The household survey contains data on all households in four villages in the Kumasi area, one defined as urban, two peri-urban, and one rural.

A systematic analysis of the family case studies was undertaken to obtain a better understanding of the dynamics of people's livelihoods, and to identify any patterns emerging in terms of access to assets and occupations according to gender, age and village type (urban, peri-urban and rural). This analysis was contextualised with general information on all four case villages, derived from the PRA, the VCS and the household survey.

Access to capital was assessed for each respondent. Four degrees of access were established, and criteria for these were defined – 'no access', 'low,' 'average' and

'good access'. The findings complement the broader information from the VCS and the quantitative data on the household survey, on the levels of capital assets and provide additional insights.

2.1.4 GIS/Remote Sensing

In respect of the defined project outputs the following research activities were undertaken.

1. Undertake an inventory of the data contained within the KUMINFO GIS to determine the spatial coincidence of the remote sensing and other geographical data with the socio-economic data.
2. Examine the level of integration of the socio-economic, remote sensing and other geographical data achieved by existing analyses of livelihoods and to identify additional analyses by integration of these data sources.
3. Undertake additional interpretations of the existing geographical data sources to fill existing knowledge gaps.
4. Specify additional activities required for filling remaining knowledge gaps.
5. Update KUMINFO GIS with results of further analyses of existing data.
6. In collaboration with other project members determine the extent to which the project outputs are met by the combined analysis of the existing data.

2.2 Activities in Phase 2: February to May 2001

A key decision at the end of Phase 1 was that the field work would concentrate on the four villages which had been the focus of studies in R6799, that is Aburaso, Swedru, Duase and Apatrapa. Profiles of each of these villages are presented in Appendix 11 at the end of Annex G.

2.2.1. Literature review of livelihoods and poverty in Ghana.

A review of wider literature on the experience of poverty in Ghana was conducted, relating key findings to those from the characterisation of the poor conducted in Phase 1. This work was done in UK and Ghana, facilitating access to both international literature and to local material only easily accessible in Ghana.

2.2.2. Poverty focus groups

Further field work was conducted in order support the literature review, and to compare the characteristics of poverty identified through different information sources, with a detailed understanding of village-level perceptions of poverty and livelihood changes in peri-urban Kumasi. The research team conducted focus group interviews with men and women of different age groups, to explore the perceptions and experience of the poor and how they evaluate alternatives.

The principal question that was addresses was: *What are the factors that push people into poverty and what strategies can extract people from poverty?* These constituted the basic questions of the discussions in four villages around Kumasi: Aburaso, Swedru, Duase and Apatrapa, where 23 focus group interviews were conducted to explore the perceptions and experience of the poor and how they evaluate alternatives.

Visits were made to the villages to consult with the traditional and local authorities in these communities and to arrange meeting times that would be convenient to most of the people and likely to attract larger numbers to join the discussions. A checklist for the focus group interviews was developed and discussed and revised in the light of

the experience of the early visits. Discussions were held with groups of men, women and daily commuters, separately and in two age groups i.e. under 35 years old, and 35 and older.

Discussions focused on the factors that led people into poverty, potential strategies to escape from it, perceptions of poverty, the changes to livelihoods that have occurred with urban expansion and how these related to poverty. Changes in social relations, the physical assets of the community, their natural resources, health, education and financial status, were explored and the consequences discussed.

The dimensions of social and cultural change were particularly pronounced in the discussions, and helped to throw more light on the understanding of poverty. The discussions also were important in clarifying the views of different groups on their preferred alternative livelihood options.

2.2.3. Use of ADP imagery in study of changes in land use

The major resource used was the images from the aerial digital photography (ADP) obtained in December 1997, which provided this project with a highly detailed baseline set of data of the state of land use at that point. The intention was to use ADP imagery to determine land use changes over the intervening four years, and whether changes varied spatially in relation to Kumasi, and what changes had occurred over time. Issues related to the processing of these digital data are considered in the Methodology section of Annex B.

Participatory Land Use Mapping fieldwork was carried out during April and May 2001 in two of the four villages, Aburaso and Swedru. Because of the land litigation and a forthcoming court case concerning land disputes in Duase, it was felt that a participatory mapping exercise including the village boundaries was not advisable. Kingsley Boateng had visited Duase twice but had not been very successful. In addition, Duase is only partly covered by ADP imagery due to its proximity to the airport, over which aerial photography is prohibited. Apatrapa is now almost completely built up, and other surveys had shown that all respondents had lost whatever farming land they had access to. Therefore, it was decided not to include this village in the fieldwork for this component of the project.

Image maps at 1:5000 and 1:2500 scales were produced, and printed out for use in villages. Specific identifiable features on the ground (e.g. trees, paths), which had not changed in the intervening four years, were used to locate where land users' plots had or still existed. The mapping of Aburaso started with a reconnaissance survey of the village by the Ghanaian research team, using the village residents as key informants. The team identified features along the boundary, mapped them and took GPS positions and photographs to indicate features present at the time of mapping. Those who still had field plots took the team out to the field to see them. These were geo-referenced with a GPS, so that their location could be accurately plotted on the mosaic. The farms of six respondents were visited and the plots they were managing were digitised and positions recorded. Each respondent was interviewed to ascertain what changes in land use and his or her access to land had occurred since 1997.

2.2.4. Household level surveys

Findings from earlier research in Peri-urban Kumasi, summarised in Annex Gt, highlight that major changes such as loss of farmland due to residential development (housing plots and sand winning sites) has had an impact on poor people's livelihoods. However, there was little insight into the dynamics of such changes and people's strategies to cope with them. Work in phase 2 aimed to explore the factors

that encourage people to adapt their NR based livelihoods towards a mix of NR and non-NR based livelihood strategies, in order to enhance understanding of such dynamics.

The follow-up study was carried out in the same four villages (Duase, Apatrapa, Aburaso and Swedru) where the household survey and the family case studies were conducted in 1997. This allowed the team to build on the existing information and links with the village members and traditional authorities. Comparisons drawn between characteristics identified in our phase 1 analysis of the household survey and those in the 66 Village Characterisation Survey, confirmed a reasonable degree of representativeness of the four villages

The team conducted semi-structured household interviews to explore the dynamics of changes in previously predominantly NR based livelihood strategies. The household interviews explored access to assets, with a particular focus on access and control over land, household composition, sources of income, relations within the household and within the family house, social linkages and constraints and preferences concerning livelihood strategies (see Appendix 2, Annex H, for household survey checklists).

2.2.5. Decision making processes in determining livelihood strategies

For comparing the local preferences, opportunities and profitability of NR and non-NR strategies, focus group discussions with different types of occupations were also conducted to gain an understanding of the nature and dynamics of different enterprises (see Appendix 1, Annex H, for checklist on occupation based focus group discussions). Those selected were the most prevalent occupations as identified during project R6799 and reinforced by the review of previous work in Phase 1 (Annex G), with particular emphasis on those associated with the poor, aged and with men and women. Additional information was gathered through the semi-structured household interviews.

The following occupation based focus group discussions were conducted:

- Masons: young men (Aburaso/Apatrapa)
- Food crop farmers: old women (Apatrapa)
- Food crop farmers: old men (Aburaso)
- Vegetable farmers: young women (Aburaso)
- Traders: old women (Aburaso)
- Traders: young men (Duase)
- Hairdressers: young women (Duase)
- Cooked food sellers: young women (Duase)
- Shoemakers: young men (Duase)

2.2.6. Study of the role of institutions in mediating access to land

The key finding from previous work, reviewed during Phase 1, is that access to agricultural land in the peri-urban area is decreasing due to the proliferation of plots demarcated for building (Annex D), but the team was unclear about the implications of the increasing land ‘sales’ on poor people’s livelihoods. Further fieldwork in Phase 2 aimed to address this.

Fieldwork was carried out by the team for 10 days during April and May 2001. Semi-structured interviews were conducted in Aburaso and Swedru with chiefs (or their representatives), elders, unit committee representatives, heads of clans and families (Aburaso only), women who had lost access to farming land (Aburaso only). In the

District Assembly of Bosomtwi-Antwima-Kwanwoma (BAK) the head of the physical planning department was interviewed, as was the assistant to BAK's Coordinating Director. Other interviews were held with a representative of Esereso's land allocation committee and the lands officer of the Asantehene's land secretariat. Professor Kasim Kasanga is a member of the Asantehene's land advisory committee and contributed insights from his experience in this role.

2.2.7. Workshop in Ghana

A workshop was held on 8 and 9 May, 2001, where key findings from the project were presented, and these discussed by participants. Apart from the research team, there were 14 participants from academic institutions, nine from relevant target institutions (NGOs, Ministry of Agriculture, District Planning Departments, and 15 residents from the four villages in which fieldwork was conducted.

The proceedings of the workshop have been issued separately'

2.2.8. Agricultural economics

This was an unplanned activity, not represented in the revised logical framework.

During the workshop it became apparent that a key, but missing, component was an understanding of the economics of agricultural activities. There was no time to rectify this omission in the field, so P. Osei-Bonsu copied 12 relevant students' honours and diploma dissertations from the University Department of Agricultural Economics, and forwarded them to UK.

A post-doctoral researcher, Dr J. C. Tuson, at the School of Agricultural and Forest Sciences, University of Wales Bangor, and agricultural economist who had conducted his own fieldwork in Ghana, was commissioned to synthesise the findings from the dissertations. In the event, six were considered to be usable.

3. OUTPUTS

This chapter sets out the main findings from Phase 1 of the research in relation to the outputs. Appendices contain longer reports for the areas of agricultural systems, land transactions and poverty and livelihoods.

3.1 Output 1

Better understanding obtained of changes in the PUI and their implications for the dynamics of livelihood strategies of the poor. Specifically:

1.1 Land use changes as driven by urban influence.
1.2 Temporal and spatial changes in crop and livestock systems – including post-harvest – driven by urban development
1.3 Improved understanding of changes in land transactions (including formal and informal arrangements, market changes, temporary renting and leasing, etc.) and their associated institutions.

It should be noted that in the revised logical framework, these are numbered from 1.4 to 1.6.

3.1.1 Land use changes as driven by urban influence

Output 1.1 was particularly informed by further work on assessing the available geographical data sources. From the above output, the following approach was agreed:

1. Derive quantitative data describing the physical changes occurring in Kumasi PUI and representative of the wider environs of Kumasi.
2. Identify additional interpretations of the geographical data that would support closure of knowledge gaps identified by project R7549 and the other teams in the project.
3. Undertake additional archiving and processing of the geographical data to support Phase II activities.

Geographical Data Coverage

The spatial coincidence of the main geographical data sources and the villages in PU Kumasi were reviewed using coverage by the ADP as the main selection criteria. The results are presented in Table 3.1.

The 1997 ADP aerial survey resulted in extensive coverage of urban Kumasi, but only partial coverage of peri-urban Kumasi. Consequently, of the 66 villages in the Village Characterisation Survey, two have coverage by the 1995 ADP data (these data comprise separate red and near-infrared images) and a further 14 have coverage by the 1997 ADP data (these data comprise false colour images). In addition much of the ADP data remain in the original raw format on the CD-ROM archive although a significant number of the individual images have been geo-referenced and made into mosaics. Mosaics of the individual images, with some additional processing to balance the differences in the illumination conditions between images, are required to allow the full potential of the images to be gained in supporting the research activities undertaken in the field. Mosaics exist for 5 villages, and for three of these villages no prior interpretation had been undertaken. Of the 4 villages where the detailed household survey was undertaken, only Swedru had the ADP data mosaiced. Consequently, it is necessary to derive mosaics for Apatrapa, Aburaso and Duase (though Duase has only partial coverage by the 1997 ADP), if further work is to be supported by such images in further phases. This work is on-going and is supported by geo-referenced data supplied by NRI.

Table 3.1 Coverage of geographical data sources

	Geographical Data Sources					Socio-Economic Studies			
	1972	1994	1995	1997	1997	1995	1997	1997	1998-99
	Map	SPOT	ADP	ADP	ADP Mosaic	BS	PRA	VCS	SS
Abrade	Y	Y		Y				Y	
Aburaso	Y	Y		Y	C			Y	Y
Adagyo	Y	Y	Y					Y	
Ahwiaa	Y	Y		Y				Y	
Apatrapa	Y	Y		Y	IP	Y		Y	Y
Asago	Y	Y	Y					Y	
Bakwankye	Y	Y		Y	C			Y	
Besease	Y	Y		Y				Y	
Boku	Y	Y		Y				Y	
Bremen	Y	Y		Y				Y	
Daku	Y	Y		Y	C			Y	
Deduako	Y	Y		Y				Y	
Duase	Y	Y		Y	IP	Y	Y	Y	Y
New Ahenema Kakoben	Y	Y		Y	C			Y	
Pease	Y	Y		Y	C			Y	
Swedru	Y	Y		Y	C		Y	Y	Y

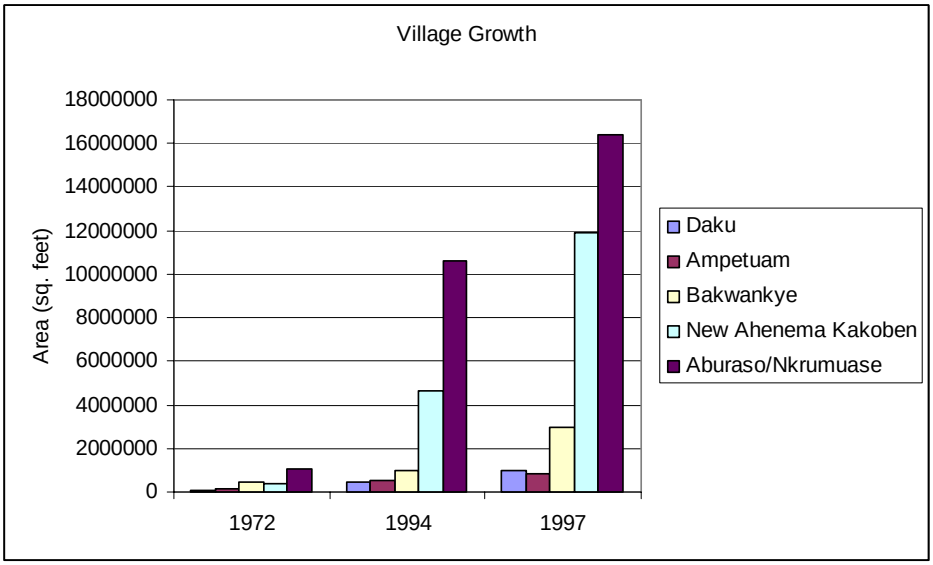
BS=Baseline Survey, PRA = Participatory Rural Appraisal, VCS = Village Characterisation Survey, SS = Socio-Economic Survey

C = Completed, IP = In progress

Relation of Built Environment Area and Farmland Area

The key informants in the VCS survey indicated for all but three villages (Domeabra, Fankyenebra, and Pease) that residential area had increased and farmland area had decreased. Additional interpretation of the available ADP mosaics was undertaken and suggests that change in residential area is the largest component of change in the built environment area. In addition, the interpretation also suggested that those villages that had exhibited the largest degree of growth during the period 1972 to 1994 had reduced rates of growth during the period 1994 to 1997. However, for the two villages (Ampetuam and Bakwankye) that had the lowest growth rates during the first period, the growth rates had increased substantially. The magnitudes of change are shown in Figure 3.1 and reveal substantial variation between villages.

Figure 3.1 Village growth



Although only Aburaso (one of the villages where field work was carried out during the current project) is represented in Figure 3.1, it is interesting to compare the histogram data with mapped data presented in Figure 6 in Annex B. These changes are likely to have a substantial impact on those people where use of NR production systems comprise a substantial component of their livelihoods strategies. A direct effect occurs where there is a loss of access to land for NR production activities. An indirect effect occurs where reduction of the land area for farming leads to a reduction in the fallow rotation period and/or farm plot areas and the potential for reduced soil fertility and soil erosion. A limited degree of quantification of this issue is possible from the VCS survey.

Table 3.2 shows the relation between residential area and farm area from the VCS survey. All of the villages where residential area is the dominant land use are "urban" in the VCS survey. In the majority of the remaining villages it is indicated that most of the total village area is still available for farming. Therefore the pressure on the traditional agricultural production system may be less than currently envisaged from the responses to the VCS survey questions. The VCS indicates that there are reductions in the fallow rotation period and consequent reductions in soil fertility. The only direct measurement of the fallow rotation period was undertaken in Swedru ("Rural" village) as part of R6880 and indicated a rotation period of 5 years (i.e. for every 1 plot being cultivated 4 plots were in bush fallow). There are no verified direct measurements of the fallow rotation period and soil fertility indicators for those villages where growth rates have been high. There remains a knowledge gap in respect of quantifiable measurements that confirm the degree to which the productivity of the traditional agriculture system is showing a longer term decline and the degree to which there is a shift to semi-permanent cropping that might be unsupported by additional soil fertility improvement. Closer to Kumasi large-scale intensive vegetable production is being undertaken in specific locations and further investigation of this might be warranted.

Table 3.2 Residential and farmland area in the VCS villages

	Farm land area - number of villages				
Residential land area - number of villages	None	Some	About half	Most	Almost all
None					
Some			8	39	
About half			8		
Most	5	4			
Almost all	2				

Built Environment Area and Population

Population growth is recognised as a critical factor leading to change in natural resources production systems in peri-urban Kumasi. However, planning is hampered by lack of knowledge of the actual changes in population that are occurring at the village level. Previous research has demonstrated that satellite measurements of the built environment area can be successfully related to population. An analysis was conducted using the satellite derived measurements of the built environment area and the village level population estimates from the VCS survey and population census estimates for 1970 and 1984 provided by NRI for a sample of the VCS villages. The relations between the satellite built environment areas and the available

population data were sufficiently strong and linear to allow a regression estimator to be developed. Regression estimates for three dates were derived for the peri-urban and rural environs of Kumasi covered by the SPOT image. These estimates are given in Table 3.3, together with confidence intervals and the relative standard error. All estimates possess relative standard errors below 10%.

Table 3.3 Estimates of the population of the peri-urban and rural environs of Kumasi

	1972	1984	1997
Population estimate	338006	451567	1051794
Confidence interval	35662	56442	115340
Relative standard error (%)	5.4	6.4	5.6

The estimates reveal substantial growth in population during the period 1970 to 1997 and a current total population in the peri-urban and rural environs of Kumasi of over 1 million persons. Further processing of these data could be envisaged to allow an indicator of the pressure on the natural resources base to be estimated. More specifically the SPOT data could be processed to derive an estimate of the land available for cultivation, although a more precise determination would require the multi-spectral image to be obtained that was acquired by the SPOT satellite at the same time as the panchromatic image. The lack of knowledge regarding village boundaries prevents a direct calculation of the population density at the village level and a method to account for this would need to be developed.

Processing of the ADP

Further processing of the ADP archive of data was undertaken. A mosaic of ADP images was generated for Aburaso and the ADP images acquired for Apatrapa and Duase. These were used in fieldwork as described in Annex B.

The major findings from the participatory land use mapping exercises were:

There is a clear spatial effect of proximity to Kumasi. Figure 4 in Annex B shows that in Apaptrapa (now effectively a suburb of Kumasi) in 1997, although mostly already built up, some farmland remained. Table 1 in Annex B, compiled from household level surveys (Annex H) indicates that by 2001 none of the respondents had access to any farn land other than undeveloped housing plots.

Slightly further away from Kumasi (but now almost contiguous), there has been extensive loss in agricultural lands in Aburaso; parts of the area for subsistence agriculture have been demarcated for new developments (Figure 6, Annex B). These new infrastructural developments are usually villa type houses with single occupancy. This has resulted in a general decline in farming activities in the village. Most farms in Aburaso are now further away from the village in an area that has not been demarcated for residential development. The farmers feel more secure because there is less possibility of their farms being destroyed because of new developments.

In Swedru, 15 kn to the north, the loss of land is considerably less (Figure 10, Annex B).

Six respondents in Aburaso were interviewed about their experiences of changes in land use and access to land. Two case studies are presented below, one respondent having lost land, the other having experienced less change.

Case Study 1. Mrs Margaret Donkor.

Her plot is located within Aburaso village lands and is an upland plot.

Ownership in 1997
This plot belonged to the respondent's father in December 1997. It was a combination of food and tree crops mainly of cassava, yam and some oil palm. The purpose of this land use was to feed the family and provide some cash when palm fruits were sold. It changed hands when her father gave it to her as a temporary gift to farm on. There were no contractual arrangements with the father who is now deceased. When he was alive she used to give him some money after selling her maize.

Ownership in 2001
The daughter still holds the land and she continues to grow food crops, such as cassava, maize, pepper and garden eggs (aubergine). The tree crop is gone. The land still provides food to feed the family and some cash when maize is sold.

At the time of the survey (April 2001) some changes had occurred on her land.

- Part of this land now belongs to someone who is about to build a house on it. The respondent does not know who the person is. She saw heaps of sand on a portion of her land. This usually indicates that someone is about to put up a house.
- She does not know the person who allocated the portion of her land to developers but believes it is those who have been allocating other lands in the village.
- She does not know the type of transaction that led to the land being allocated.

All these point to the fact that there is little consultation between land users and those who have the power to demarcate and allocate these lands.

Case study 2. Mr Yaw Nsiah.

Located within Aburaso village lands in a valley bottom. It is actually the chief's land although the respondent is the user.

Ownership in 1997
The respondent, has being using the land since 1997. It was mostly an oil palm plantation and the fruits were sold for cash.

Ownership in 2001
The same person is still farming on the plot. The land use has not yet changed as it is still under oil palm. However, the land has been allocated by the chief for development, but there is no sign of building activity . The land user knows that as soon as development activities start on his farm he has to find an alternative source of livelihood. He has not thought of what he can do because at his age the options are few. He is however hopeful that he would find a way of making a living when the time comes for him to move on.

The circumstances experienced by the respondents appears to be typical (for the remainder, see Annex B), in that they have no control over events that shape their lives, and appear to accept it stoically; at least that is the attitude presented to outside enquirers. The following points came out clearly during the participatory land use mapping exercise, and support findings from the household level surveys and occupation focus group (Annex H).

- Almost all respondents mentioned the reason for change or expected changes in land use as the demarcation or allocation of the land for housing development.
- A smaller proportion mention change in use because of decline in soil fertility.

- A third of this small sample have not yet experienced any change in land use, but none is free from the threat of loss of land.

3.1.2 Crop and livestock systems

The research summarised here relates in particular to Annex A, and Annexes B and C are also relevant.

Assessment criteria
The researchers highlighted the need to gain understanding of how far the existing available data enables the following to be described:

- effects of urbanisation on the natural capital base of farmers : availability and quality of land, soil, water, natural vegetation
- effects of urbanisation on land use patterns, including trends in areas under different cropping systems, numbers of people involved in livestock systems

The researchers strove to keep in mind the following questions:

- Have there been trends to intensification of land use for farming and if so what are they, who is intensifying, where and why?
- What have been the effects of urbanisation on different family members?
- What have been the effects on total amount of land used for farming in the villages?
- What do the similarities and differences between urban and peri-urban agriculture tell us? Are there trends over space and time?
- How representative of the situation in and around Kumasi are the four case study villages?

Land availability and quality
The available information clearly shows that there is an increased use of croplands for housing and sand winning in peri urban Kumasi (PUK). Reports of surveys (R6799) conducted in villages within PUK showed that in about 90% of the villages agricultural lands were being used for housing; in 11% of the villages, there was virtually no farm land left. There were also reports that part of the croplands was being used for sand and stone winning but the extent of damage caused was not indicated. Larbi (1996) estimated that in 1990-1993 about 2100 ha of agricultural land was converted to urban use *annually* in peri urban Accra. Between 1993 and 1997, the estimate shot up to over 2600 ha *per year*. Similar losses of agricultural land by sand winning are likely to be occurring in PUK considering the boom in the housing industry. Housing and sand winning are not only reducing the total area of land available for farming but, more importantly, are affecting the quality of land remaining. The uplands, which are suitable for the production of the major food crops, are increasingly being lost for housing, leaving only the valley bottoms and wetlands. Total loss of the uplands to housing was reported to have happened at some villages, for example Abuakwa and Kwadaso.

Furthermore, according to the local respondents, the problems of decline of soil fertility and weeds were on the increase in most of the villages. Decline in soil fertility was attributed to shortened fallow periods and frequent cropping without adequate soil improvement measures. Perennial grasses such as guinea grass (*Panicum maximum*) and spear grass (*Imperata cylindrica*) were cited as the major emerging weeds. Bush fallow was the main method used to restore soil fertility.

The assessment of soil fertility by farmers is influenced by the perception of the cost and effort required to improve or restore it. The perception amongst the majority of respondents to the various surveys seems to have been that:

1. As the quantity of land is reduced, it is used more often for cropping – fallow periods are reduced.
2. For the most part, the only cost-effective fertility restoration method is bush fallowing.
3. Perennial grasses, with their low nutrient demand and ability to thrive where frequent careless burning occurs, frequently invades the reducing-length fallows.
4. It is more costly (using for example the possible management practices likely to be most successful such as slashing, cultivation, pressing, cover crop competition or herbicides) to remove guinea grass than traditional bush fallow species, therefore a vicious circle exists whereby it is not considered worthwhile investing other resources to restore fertility and the land is abandoned.
5. Where some measure of traditional bush fallowing is possible, the cost of labour for clearance increases anyway with urbanisation due to competition for that labour.
6. Therefore even in this case the remaining uplands are not farmed any more intensively – in the sense that inputs and outputs are increased - than traditionally.

The point about the problems of grass invasion has been highlighted by a recent MSc thesis based on fieldwork in Atwima district, including a peri-urban village (Frost, 2000). Additionally this is borne out to a large extent by a survey of spear-grass dominated fields owned by several hundred farmers in Benin and Nigeria (Chikoye *et al* 2000), in which it was found that the farmers perceived that labour costs were increased and that labour intensive control was in the great majority of cases the only option open to them due to lack of capital. Only 2.3% of the sample used herbicides for control (and the researchers found that in these cases sometimes an inappropriate chemical was used). The survey was carried out in the coastal / derived savannah (and southern Guinea savannah), where the climatic regime does not differ greatly from that of Kumasi. In the survey fields, the average fallow length was three years or less in the coastal / derived savannah zone. 55.3% of farmers regarded spear-grass as the most important weed and 62.9% said that they lacked the capital resources for sustainable management of the problem. Manure based systems for maintaining soil fertility appear to be absent around Kumasi, but do occur elsewhere is west Africa (e.g. Hoffman et al., 2001). The related matter of the number of livestock around Kumasi is addressed further on in this section.

There is a contrast in land allocation processes between peri-urban and urban Kumasi. With urbanisation, there has been a decrease in stool and family lands and an increase in church and private lands. Results of the KNRMP survey conducted on agriculture in the urban gaps of Kumasi showed that almost all the land used for farming belonged to the state and about 80% of the farmers felt secure in cropping the land. In the peri-urban areas however, most of the farmers crop on stool lands, which are prone to “sale” for housing, therefore security is not guaranteed. Access (by the prevailing allocation processes) to land was found to be easier in the urban situation than the rural in an earlier survey of horticulture in PUK (Hall 1996).

Yet the tomato farmers with whom the KNRMP worked for several seasons in Daku, which is a village at a relatively early stage of urbanisation, did not have any complaints about security within the traditional land allocation system, to the extent that the planting of cover crops and green manures, which are an investment for a succeeding crop, were not constrained by the land allocation system. It is notable, and may merit further investigation, that the PRA found that Daku has a rather unusual stool system whereby the position of chief is rotated amongst the eight principal indigenous families and this might be expected to reduce the incentive for the chief to allocate plots for development for personal short-term gain since the other families might be keeping this in check.

It has been said (Moustier 2000) that the major constraint for long-term sustainability of urban agriculture is making access to land more secure; for this, an NGO working in francophone Central Africa and Cambodia has "induced" the government to protect from urbanisation a major production area, to indemnify the customary land-owners, and to have the farmers rent the plots to public authorities (ministry of agriculture + livestock). This would appear to be a rather directly interventionist response to the situation and one unlikely to be applicable in the complex land tenure and allocation system prevailing in PUK. On a short term basis Moustier argues that the major constraints for the sustainability of urban agriculture are production risks, resulting in marketing risks, such as unfavourable climatic conditions, pests, water surplus or deficits. Innovations here included the testing of new varieties adapted to the climatic conditions; testing new crop rotations/associations; providing low-cost irrigation; and organising a market information system to inform producers on the times of the year with market shortages/deficits.

In Fiji there was some years ago a Government / City Council initiative to encourage home allotments and other types of urban agriculture to help improve the nutritional intake of urban families, after it had been determined by health officials that the nutritional intake of urban families was far worse and worsening compared with rural families, because urban families were turning to consuming processed foods (e.g. packets of crisps, fizzy drinks) instead of their traditional and more wholesome subsistence crops. In contrast in Harare, it has been determined that the poorer families in particular still eat their traditional staple crop first, and largely speaking, other items are only ever 'icing on the cake' rather than the 'cake itself'. Particularly, as per unit bulk (in terms of its ability to satisfy human hunger), maize is still by far less expensive. (Bowyer-Bower 2000a).

The Ashanti people of Kumasi show considerable devotion to their traditional staple food stuffs, principally *fufu* - fermented pounded cassava, which is also favoured for chips and together with maize is the preferred staple food. Yet with the removal of the uplands suitable for its cultivation these traditional crops have to be transported longer distances. Were some of the uplands in the peri-urban area to be preserved for cassava it could reduce costs of feeding the city.

Implications for the dynamics of livelihood strategies

The selective removal of the uplands - normally utilised for traditional staple food cropping, and the collateral preservation of the valley bottom lands which are suited to certain specific cropping systems (producing for the most part non-traditional staples for the Ashanti region), influences both farming system and possibly food consumption patterns in the peri-urban transition. Earlier studies have also indicated that poorer people are possibly more likely to depend on uplands, though this requires investigation of cause and effect.

The explanation for the non-intensification of farming in PUK advanced above could be further investigated, to test for validity, particularly stratifying by wealth, age and gender. Responses could indicate appropriate livelihood strategy interventions. The responses of the stool occupants to demands for land for urbanisation may be affected by the type of stool tenure, as in the example of Daku given above, as well as the altruism or lack of it exhibited by chiefs in the matter of allocation and compensation for lost land.

Planning authorities may feel constrained from zoning areas specially for urban and peri-urban agriculture as they do for other land uses because it may be looked upon as a transient activity. This is to say that it is forced to give way for other town/city

development activities (houses) and because of this farmers have to look to moving to other areas to continue their activities (Mlozi, 2000).

It has been proposed (Bowyer-Bower, 2000b) that the constraints on urban and per-urban producers in Harare – a city where urban agriculture has in the past been strongly discouraged - can best be mitigated by legislation of agreed terms for urban agriculture which would need to include:

a) security of tenure over use of land;
b) policy on who is to be allowed to undertake urban agriculture and where;
c) implementation of suitable and effective agricultural extension guidelines to limit negative environmental impacts.

Whilst the authorities in Kumasi have generally been tolerant of urban agriculture activities, such policies could merit consideration in their situation.

Another important policy aspect which may also be considered under later phases of the NRSP peri-urban research programme is the establishment of a platform on which municipal decision makers and representatives of the urban and peri-urban agriculture (UPA) producers meet to negotiate the conditions under which UPA will be permitted (and preferably are also supported) by the authorities. This implies an additional policy goal: to leave the actual management of designated UPA areas (both subsistence and market-oriented) to local associations of the UPA producers (van den Berg, 2000).

During the Participatory Land Use Mapping fieldwork in Aburaso, discussions where held with young people about what they thought about loss of land and farming. They said most of the younger people are not interested in farming because they do not see farming as a profitable venture. Even though the village has lost some of its lands to housing development, some of it is still available to those who are serious about going into farming. They believe that those who are complaining about loss of land are aggrieved because they have not been allocated with land that they can also build houses on or to sell to developers, and not for farming purposes.

The young people also said the old women who are very poor go into farming because they have no alternative but most of them would rather do some petty trading if they had a choice. The perception of the young people is that land for housing purposes is the problem and not land for farming or agricultural purposes. Generally people in the village are not interested in farming.

Water supply
In the R6799 PRA and R6448 baseline studies, only few villages reported problems with availability of water supply and this occurred mainly in the dry season. Most of the villages did not have piped water and therefore relied on boreholes and streams for their water supply. Among these water bodies in the villages, a significant proportion were said to be contaminated due to improper waste management. The Kumasi Metropolitan Assembly (KMA) was said to be responsible for contamination of some of these water bodies.

Apart from the problems associated with quality, accessibility of water supply has been identified as a major constraint to crop production in the dry season in PUK. According to Cornish and Aidoo (2000) although dry season farmers in peri urban Kumasi did not list availability of water as an important constraint to production, they listed accessibility of the water supply as the second major constraint after credit. This is because most farmers used manpower to carry water from the source to the crops and the labour or cost involved was enormous. It appeared from the PRA and

baseline studies that very little was being done to conserve or improve the efficiency of off-take from the water bodies.

Implications for the dynamics of livelihood strategies

Compared to land, there are fewer competing demands for water, the problems associated generally being more to do with movement of water and its quality than rights and access to the water. The principal problems are reported by the Kumasi Watersheds project (CEDAR 1999) to be:

1. River water pollution
2. Contamination of boreholes
3. Unregulated waste tipping
4. Local over-exploitation

These problems, by their nature, require solutions through community and institutional actions. For those farmers engaged in vegetable production, a further hazard is the possible contamination of marketed produce by foul water. This problem could be tackled at both individual (extension) and institutional level (provision of clean water at markets).

Cropping systems

The type of crops grown in the villages researched by the KNRMP was said by many respondents to be urban driven, mainly influenced by demand from Kumasi. The second major determinant of cropping system is the influence of the demarcation of farmlands for housing, which has brought about insecurity in land ownership and has reduced interest in long term investment in land. There has therefore been a shift away from tree crops. However, some new oil palm plantations are also being established in the valley bottoms in response to increasing demand for the oil.

The shift has been to annual crop production, which increasingly includes vegetables, which implies an increase in intensification by virtue of increased inputs required and returns obtained. This was reported in almost all the PRA and baseline study villages. But, as we have noted, due to the constraints of access to water, this is usually restricted effectively to valley bottoms and lower slopes. Intensive vegetable farming is associated with the use of agro-chemicals (fertilisers, herbicides and fungicides). Results from the VCS showed that both men and women, the elderly and the youth, are involved in intensive vegetable crop production. There have been anecdotal accounts of “hit and run” horticulture, said to be favoured by the youth, but Cornish and Aidoo (2000) did not find any strong evidence for this practice in their study of irrigated horticulture in peri-urban Kumasi. Reference was made to the KUMINFO GIS to query the VCS data and the results (Figures 3.2 and 3.3) appear to show that in the surveyed villages, where there are concentrations of tomato farmers (tomatoes being the most popular horticultural crop), in most cases it is carried out both by older (>approx. 35 years) and younger men. This with the exceptions of the village of Heman, where it would appear to be more likely to be older men growing the crop and Apeadu and Deduako, where younger men predominate.

Specialised valley bottom farming of taro, sugar cane and to as lesser extent oil palm and rice production has also been on the increase in some villages. Maize, which can be grown in most agro-ecological niches, is now increasingly being harvested and sold fresh in the cob (green maize).

Figure 3.2 Villages where most or all farmers grow tomatoes and most or almost all older men are farmers.

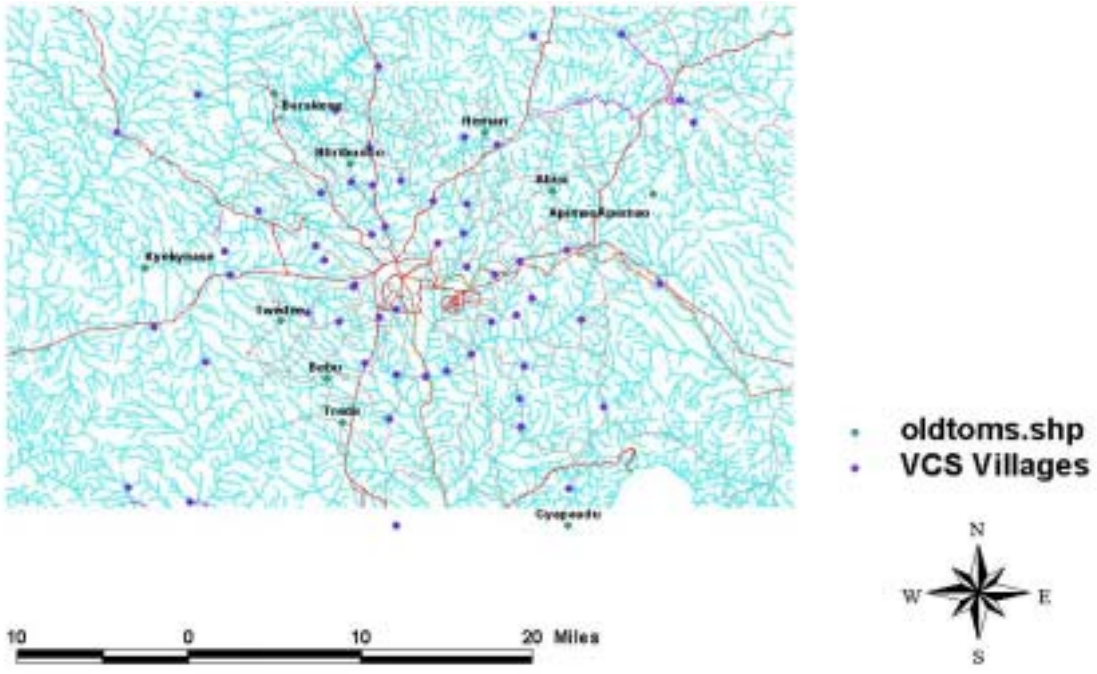
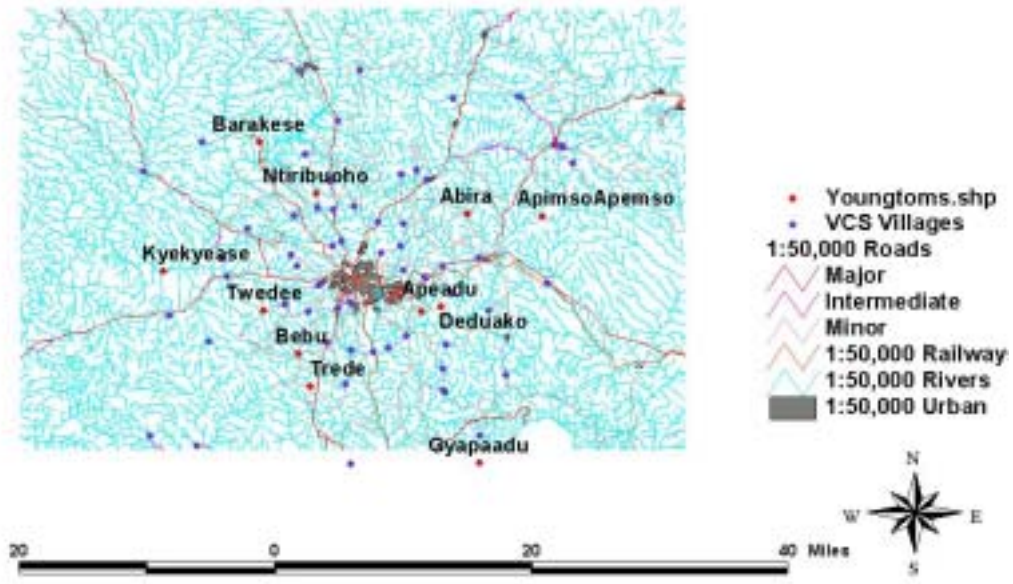


Figure 3.3 Villages where most or all farmers grow tomatoes and most or almost all younger men are farmers.



Chemical fertilisers and poultry manure were used on limited scale especially on intensive vegetables and a few farmers were found to be applying herbicides in

maize and rice, though these were probably larger-scale more business-oriented farmers.

Implications for the dynamics of livelihood strategies

Agricultural intensification is not an option which is available to all sectors of the peri-urban population. The opportunities are unevenly distributed, often to the disadvantage of those already disadvantaged. Those dispossessed of land are often poorly compensated, if at all so cannot use capital from land transfer as a stepping stone to a different means of sustenance.

Agricultural intensification may occur as a result of (a) an increase in the inputs, without technological changes; (b) a shift towards more valuable outputs; or (c) technical progress that raises land productivity (Carswell 1997). In practice, the intensification process may occur as a combination of these but the relative feasibility of the three components is likely to vary greatly in different areas.

Adam *et al.* (1998) have suggested that to the upland crop farmer, who is likely to traditionally engage in the bush-fallow mixed food-cropping system, process (a) is unavailable since the resource base (i.e. fallow availability) is declining. If he or she does not have access to suitable land in valley bottoms and lower slopes, then more valuable outputs (process (b)) such as vegetable crops are not possible and lack of capital also limits the introduction of new technology such as fertilisers or irrigation. The system has become unsustainable in the peri-urban context and if the practitioners are to remain in farming as a sustainable livelihood they will have to intensify using the most cost-effective improved technologies: the use of poultry manure on staple food crops such as maize and cassava, which has been demonstrated in the Kumasi area, is one possibility (Quansah *et al.* 1997, Kornahrens *et al.* 1998).

Drechsel (2000) has pointed out that, in the context of Kumasi, urban agriculture is important for poor(er) people “as a survival strategy - or as some call it as a response to crisis". However, urban agriculture is not only a domain of "poor" people. In Kumasi, there are other job opportunities for "poor" people. In fact, many people engaged in urban agriculture are employed in the Public/Civil services or are retailers/traders, living even in part in high-class residential areas. Many urban farmers enter into the activity as hobby, invest capital to establish the plots/farm, generate additional income and are eager to advise anybody to go into this profitable activity if only he/she can acquire land.

It has been reported (Bowyer-Bower, 2000) that the encouragement of urban agriculture as a formal urban land use can squeeze out poor women subsistence farmers and encourage larger commercial production – this has happened to some extent in Dar-es-Salaam and there is every sign that this is what would happen / is happening in Harare. Production would become/is becoming the preserve of increasingly affluent and entrepreneurial middle-men. In future the poor may only get a look in as paid labour.

There would appear to be opportunities for both men and women in peri-urban intensive agriculture, and, combining the data from two different KNRMP reports, more females are involved in peri-urban agriculture (65%) than in urban (10%) agriculture. Farming in the urban areas is mainly on a part time basis and crops grown are mainly for home consumption. In contrast farming in the peri-urban areas is mainly full time, for cash and home consumption.

One important outstanding question is to what extent the urban agricultural situation represents the end-point to which peri-urban agriculture is tending. If this were the case, temporal changes could be inferred by looking at the spatial changes evident in the urban situation. But this is by no means self-evident – local factors may be more important, such as the pressure on land for housing or industry, ratio of different kinds of land, presence of water, degree of pollution of that water, etc, etc.

Livestock

Livestock production is widespread in the peri-urban area and mainly on a free-range system. This project found little to add to previous projects and the material reviewd in R7549 (Appendix 3, FTR). The animals are mostly sheep, poultry, pigs and to a lesser extent goats. There are no data available on the number of people involved in free-range livestock production except for the small sample studies done for the urban area. The reports indicated that many people expressed interest to enter into the sector or to expand their existing stock, however no reasons were given as to why they have not done so. The urban area reports indicate that most people kept livestock for the purpose of supplementing their income, and that the dietary improvement for them and their families was of minor importance.

A report not reviewed as part of the Consolidation of Knowledge Project (R7549) presents a little further information on cattle around Kumasi,

> "On the periphery of Kumasi, and in peri-urban villages, the enterprises identified were:
> single species herds, owned by urban traders and businessmen, and managed by hired Fulani catle hands. This system is the sole producer of fresh milk in Kumasi. The milk is hawked in the town. The volume, quality and importance of this is at present unknown, buyt officially is regarded as insignificant. The contribution of this sector to meat production is similarly unknown, but may be important. The University herd's milk production is all sold on site." (Scott, 1992)

Scott goes on,

> "One area of natural interest is that of the importance and volume of livestock inputs that are generated from 'satellite' kraals. The interaction between urban commerce and investment in livestock may be an area for further investigation".

There seems to be a dearth of information about larger livestock in and around Kumasi. In a bibliography on livestock production in peri-urban areas of sub-Saharan Africa (Scott and Okali, 1993), mentions supply of meat by northern Ghana to Kumasi, but there are no other specific references to that city. The authors concluded that there are few detailed studies and little information is given on how any systems operate. Peri-urban studies did not provide an analysis of marketing strategies, business managment or even a detailed description of inputs and service supplies.

There are several commercial poultry in the villages (not fewer than 92; R7549 Final Technical Report, Appendix 3: 82-83), although only a small proportion of the population is engaged in this activity, and operators mentioned high cost of feed as the major production constraint. Integration of crop and livestock in the farming system was limited to the application of poultry manure as fertiliser by a few farmers and the feeding of livestock with crop residues, e.g. cassava peel.

The considerable value of poultry manure, both from the larger peri-urban poultry businesses and smaller enterprises both within and around the city, as a low-cost high-quality fertiliser is increasingly being realised, though not always by peri-urban farmers. There are reports of trucks transporting the manure from (peri-urban)

Kumasi to the northern parts of the country and even to Burkina Faso (Drechsel et al. 2000).

Implications for the dynamics of livelihood strategies
The most serious problems with their enterprises reported by purely urban livestock keepers interviewed in Kumasi in a survey undertaken in 1999 were diseases, lack of space and capital to expand. There was no evidence of urban-rural linkages, even to the extent that most of the feedstuffs consumed by animals had an urban origin. It is conjectured by Poynter and Fielding (2000) that livestock keeping in urban areas will decrease under community pressure if employment opportunities increase and it is only if poverty increases for any reason that urban livestock keeping is likely to continue and even increase.

Mlozi (2000), however, agrees with the findings of Drechsel cited above in that urban and peri-urban agriculture is not a domain of the poor people alone. He asserts that the findings for Kumasi are similar to those for the city of Dar es Salaam, and now for other towns in Tanzania. Most senior government officials in Tanzanian towns raise livestock (dairy cattle, chickens) because of the high earning that these people get from selling the products. In Tanzania, crop related activities are undertaken by people of lower socio-economic status than the major livestock-related activities (improved dairy cattle, improved chickens). However, there is an increase of local chickens usually on a free-range system of production among the households of poor people. The government recognises and supports urban and peri-urban agriculture in Tanzania.

Agricultural economics
As mentioned under Research Activities, a report was commissioned on the economics of agricultural activities based on the reasoning that if people (particularly younger peri-urban villagers) prefer other occupations to farming, then knowledge of how remunerative (or otherwise) is farming is essential to an understanding of motives and livelihood strategies.

Tuson, with limited reliable and detailed data, attempted to review the economic and financial patterns of a host of agricultural and non-agricultural activities in the peri-urban interface (Annex C). As a consequence of the limitations of the information avialable, any findings must be treated with some degree of caution, especially considering the minimal replication and the inherent variability reported.

Specific features reported are that with only a poor credit market, individuals undertake a range of buying and selling activities as a stepping stone to other more lucrative occupations. On face value, agricultural activities would appear to compare favourably with non-agricultural activities, especially when comparing the lower start up costs for agriculture. However, there is a greater risk and price uncertainty associated with agriculture, which could not be incorporated into the study and would in effect reduce long term gross income. As indicated in the farming systems analysis (Table 1, Annex C), land rental prices and labour costs increase dramatically with proximity to urban areas. Furthermore, costs are also determined by the relative profitability of the crops to be cultivated.

Households will be involved in a wide range of activities, some of which will be determined by economic profit maximising rationale whereas others will be undertaken to spread risk or avoid drudgery as well as for socio-cultural reasons such as prestige.

Results from this short report indicate that a much clearer characterisation of the economics of a range of activities, not just agriculture, is a key component in understanding choices made by poor people living in the peri-urban interface.

Post harvest

Very limited post harvest activities were reported in the villages. The near absence of post harvest activities could be due to a number of factors. One possible reason may be due to the proximity to the city, which has created easy access for marketing of farm produce in the raw state. For example maize can easily be sold fresh in the cob at a good price therefore only small quantities of maize is harvested dry and stored in cribs. The limited post harvest activities (processing) may also be partly due to high cost of processing equipment. Post harvest activities in the villages of PUK were mainly storage of dry maize, processing of cassava into chips and flour and processing of palm oil which were mostly done by the traditional methods.

A recent survey in Accra (under R7493) identified at least 20,000 vendors[1]. It should be noted that significant food hazards (e.g. microbial pathogens, pesticide residues, mycotoxins, heavy metals, industrial pollutants) can arise during the production, processing and marketing of foods which can seriously compromise the income and health of both suppliers and consumers.

Implications for the dynamics of livelihood strategies

It has been reported in KNRMP studies that some women from peri-urban villages were also engaged in the cooking and selling of food, and there are also opportunities for men in the street roasting and barbecue-ing trades. There appears to be some gender differentiation associated with these processing activities.

In a wide-ranging study, Tinker (2000) reported that the most important contribution to food safety is the availability of clean water to wash hands and utensils. Municipal governments in most countries need to increase water points and should require greater attention to washing. To reduce congestion on major streets yet provide access to street foods for their customers, alleys or courtyards were provided with water and even electrical connections. Some cities created food courts with chairs and tables. Water at bus stops is also an important planning issue. Overall the conclusion is that street foods are too important for both vendor and customer for governments to eradicate. Working with the vendors has been much more fruitful. FAO has supported training programs for vendors in many countries. Still the most important single planning issue is the provision of clean water.

Forest products

Only few native timber trees were left in the villages. There are, however, growing numbers of farmers, and communities, planting teak intended for construction and telegraph poles. This is often grown on an agroforestry *taungya* system, whereby the tiller of the land is responsible for the upkeep of the trees, which belong to the landowner, until it is no longer possible to cultivate annual crops. Also, observations in villages during the Participatory Land Use Mapping fieldwork were that a lot fuelwood is collected from the area, but this was not quantified.

The KNRMP reports mentioned that non-timber forest products such as snails and mushrooms are still collected. However information on their economic importance or availability as effected by urbanisation was not indicated. It was indicated that the Ministry of Food and Agriculture undertook a programme to promote these non-timber products in some villages but results of the programme was not reported.

[1] Project “Enhancing food security through the improvements to street-vended foods” , Crop Post-Harvest Programme, Peri-Urban Interface

Implications for the dynamics of livelihood strategies
Non-timber products can provide natural resources based livelihoods, which could be of importance to the poor. There is need to determine the influence of urbanisation on the availability and opportunities for exploitation of non-timber forest products. The demand for products such as mushrooms, bush meat and traditional medicines is still strong in urban Kumasi.

In other cities in Africa, for example Lilongwe, Malawi, the growing and especially selling of firewood offers quite a number of poor people a livelihood opportunity, and a limited KNRMP study has shown that this is also the case, but on a far smaller scale, in Kumasi. It has been shown that firewood is of less importance to people in Kumasi than charcoal, which is hauled considerable distances – adding "fuel miles" to its environmental cost. Virtually all the primary forest and tree products used in the city originate from outside. However, fuelwood selling was found to be the most common livelihood option for the use of forest and tree products in a sample survey of urban and peri-urban locations in and around Kumasi (Marfo *et al.* 2000).

Credit
Farmers have in most KNRMP and other surveys in Kumasi put access to credit as their number one constraint to improving the contribution of farming to their livelihoods. This subject has been studied (Harford *et al.* 1998) and it may be time to re-visit the situation, particularly for the processing rather than cultivation options favoured by the lending agencies, as part of a package of measures to be assessed under later stages of this peri-urban research programme in Kumasi.

Representativeness of case study villages
It is possible to compare agriculturally-related characteristics of the case study villages with those selected in the KNRMP cluster analysis exercise to determine the character of villages as being urban, peri-urban or rural. Table 3.4 shows this comparison.

The result shows that, allocating half-points in the case of indeterminate characteristics:

- Apatrapa exhibits 17 out of 18 of the typical characteristics of an urban village;
- Aburaso ten peri-urban, three urban and two rural characteristics,;
- Duase six peri-urban, four urban and three rural characteristics;
- Swedru five rural, four peri-urban and two urban (not all data recorded as taken from the PRA rather than the VCS, which was not carried out in Swedru).

Originally in the KNRMP studies Apatrapa was selected as representing an "urban" village, Aburaso and Duase "peri-urban" and Swedru "rural". Therefore there seems to be no strong case to reject any of these villages as being representative of these types of situation. Duase has predominantly peri-urban characteristics but lacks cocoa farms or the selling of cassava in Kumasi (urban) but is said to have no commercial poultry farm and most young women in full-time farming (rural). Swedru has a less varied farming systems spectrum (more typically urban) than the norm for a "rural" village, plus a number of characteristics to which half-scores shared with peri-urban villages have been assigned. The data base is less comprehensive for this village, as it is extracted from the PRA rather than as direct responses to the VCS questionnaires.

Conclusions and recommendations for further research

1. Land allocation and tenure obviously has a profound influence on cropping patterns, but whether the type of allocation process or the type of land taken for development is the dominant determinant of land use for agriculture is a subject for further research.
2. The present (if any) differentiation of access to different types of land – upland, lower slope, valley bottom – stratified by wealth, gender and age, would give a very useful lead in to agricultural and NR- based interventions. Also, whether there are differences in allocation and control for these different types of land.
3. The question of absentee farmers needs some attention – those having farms away from PU villages because their land in a PU village has been taken – who are they and what are the implications from the farm management and social viewpoints?
4. The perception that there is nothing that can be done about "declining soil fertility" may be firmly engrained amongst both farmers and policy-makers and deserves further investigation.
5. The question of whether all peri-urban villages are tending to an end-point with at least some common "urban" features in terms of land use is one which is of interest and use for planners and one which the remote sensing and land transactions teams could reflect upon.
6. The implication that credit provision is an appropriate means of alleviating poverty, perhaps as part of a wider policy such as that carried out through the district assemblies, should be ascertained, though this may be a task of later stages of the peri-urban research programme in Kumasi (1.4, 1.5).
7. The marketing chains for new farm products (e.g. green maize, sugar cane, groundnuts) and livelihood opportunities in post-harvest processing could warrant detailed investigation as possible subjects for attention of this and/or later phases of the programme.
8. A small but possibly significant contribution to alleviating poverty could be made by the exploitation of non-timber forest products. The effects of urbanisation on quality and quantities of this resource deserve some further consideration.
9. As a critical input for dry season crop production, more attention deserves to be given to methods of improved water supply and delivery to farms. The follow-on projects to this one would do well to liase with the ENGKARS research section of DFID and the bilateral programme to find out if there are other initiatives afoot to address these issues.
10. A much clearer characterisation of the economics of a range of activities, not just agriculture, is a key component in understanding choices made by poor people living in the peri-urban interface.

Table 3.4 Comparison of agricultural characteristics of case study villages with those selected as representative of village character in KNRMP studies

	Character	Urban	Peri-urban	Rural	Apatrapa	Aburaso	Duase	Swedru
		Most common response			From VCS			From PRA
1	Stool land as proportion of village	None	Most	Most	None	Some	Some	n.r.
2	People selling cassava in Kumasi	None	At least some	At least some	None	Most	None	Some
3	,, Tomato in Kumasi	None	Most	Most	Most	None	Most	Most
4	People buying food crops from Kumasi	At least some	None	None	None	None	Most	
5	Young men full time farmers	None	Most or almost all	Almost all or most	None	Some	Some	Most
6	Young women full time farmers	None	Half or most	Most or almost all	None	Some	Most	Most
7	Farmers growing water cocoyam	None	At least some	At least some	None	Some	Almost all	None
8	,, sugar cane	None or some	Some or none	Some	None	Some	Most	None
9	,, tomato	None or some	Some or about half	Some or about half	None	Some	Some	Some
10	,, cabbage	None	About half	About half	None	None	Some	None
11	,, oil palm	None	At least some	At least some	None	Some	Some	Some
12	,, cocoa	None	At least some	Some or most	None	None	None	Some
13	Family owned food crop farms	None	Most	Almost all	None	Most	Most	n.r.
14	Family owned valley bottom farms	None	Some or about half	Most or almost all	None	Almost all	About half	n.r.
15	Normal fallow period	0	2-3 years	4-5 years	0	2 years	2 years	5 years[2]
16	Chemical fertiliser usage	None or some	Some or about half	Some or about half	Some	Some	Some	Some
17	Commercial poultry farms	Likely	Less likely	Least likely	3	0	0	0
18	Land disputes	None	Some	None	None	One	One major	n.r.

[2] From analysis of ADP (section 3.1.1.)

						minor		

3.1.3 Changes in land transactions

Assessment criteria
During Phase 1 of this project, the existing information from previous projects was assessed according to a number of key issues that have been identified to inform Output 1.3 (see Annex D). These were:

- Types of land transactions: through which types of transactions do the poor gain or lose access to land and how do different types of transactions impact on their livelihoods – do they have to move away, change their livelihoods (how? to what?)? Do some transactions have more impact than others? Are the poor more likely to participate in some transactions than others?
- Changes over time (in frequency and form): e.g. price rises, more land sales to strangers, more short-term renting? Why are these changes occurring and where? What are the implications for the poor?
- Associated institutions: what are they and are their roles changing? What is the level of access to these institutions by poor people? What impact do the institutions have on the lives of the poor?

What is already known regarding land transactions in the peri-urban interface?
Previous reports have covered many issues relating to land tenure within and around Kumasi. Many of the activities undertaken in R6799 touched on land issues. The VCS, household surveys and land tenure studies, for example, highlighted the range of transactions that exist and that land 'sales' to strangers are increasing in many of the villages around Kumasi.

From the baseline studies in 1996, Holland et al. (1996) describe the traditional system of land acquisition and tenure and what type of land transactions exist. The information is largely descriptive, though it does note changes over time. The specific impacts on the poor were not explicitly explored. NRI and UST (1997) build on the baseline studies in the KNRMP Inception Report, describing the institutions involved in land issues, how land sales proceed and which stakeholders gain and lose from land sales.

The Knowledge Consolidation Project (R7549) included reviews of information on land and livelihood issues. Mattingly (2000:195) acknowledges that research under KNRMP has generated much knowledge on land tenure issues, but that perhaps "who owns what rights to what pieces of land after changes affected by urbanisation" is not so well known. Hillyer (2000:173-174) used data from Kasanga (1998) to show agricultural land holdings by male and female respondents in eight villages around Kumasi, with customary allocation still remaining the most important mechanism for access to land for farming.

Access to family land is therefore still important and access is negotiated within families. Membership of a family can be quite broad and can include marriage, adoption or membership through service (e.g. domestic servants). It is important to realise that 'family' is not a fixed concept and being part of a family is constantly negotiated. Like land, family ties are contested, relying heavily on people's memories of family history (Berry 2000:109). The importance people place on attending funerals and other family events attest to this. Family history matters in the PUI, since it affects livelihood outcomes. As Clark states "matrilineal succession is no guarantee of safety….for the poor or rich" (Clark 1999 cited in Berry 2000).

Data from KNRMP has shown that temporarily borrowed and sharecropping arrangements increase closer to the city (Adam, 2000:82). Duase represents an anomaly amongst the four, in that conflicts between families over land have prevented significant changes in tenure arrangements and is not typical of the area. Conflicts over rights to land are, however, common. The amount of money negotiated for cash rentals tends to rise closer to Kumasi, whilst the length of tenure tends to decline to one season only.

Research by Amanor (2000:36) on oil palm plantations south of Kumasi suggests that the changing nature of sharecropping arrangements can benefit lineage elders and chiefs, who can extract cheap labour from their daily labourers and tenants. Changes that prevent youth and the poor from gaining access to land will be welcomed by the chieftancy, Amanor argues. He also shows, however, that youth prefer to engage in sharecropping arrangements outside their family. This can make it easier for them to access land (through the *abunu* system of sharing half of the land and crop) and also avoids obligations to kin.

Disputes over access to land appear common. Gyasi (1994) concludes that even where land has been granted to a family or community or has been transferred to it, security is "dubious at best" and that intra-family disputes do arise due to uncertainties over who has the authority to allocate land. Land is not just subject to 'property rights', but is something to be negotiated and struggled over, even to the extent that litigants in courtroom land struggles may invent fictitious claims to land and argue them out. Without the potential power to re-negotiate or challenge land transactions, sometimes with little grounds, people would be "excluded from the discussion" (Berry 2000).

Research to date has, then, identified key trends and issues, but has not clearly linked these to the livelihood strategies of the poor and has not disagregated or quantified the changes in areas such as sharecropping.

Layout plans

Layout plans generally appear to extend the existing village housing core unless the physical site characteristics restrict this village expansion. Although the expansion normally appears to be in the direction of Kumasi, a village chief may have some choice about where the layout plan is located within the village and hence can influence the directions of housing expansion. This may have implications for the impact of the layout plan on the various families within the village. Individual members of families farming land closest to the existing village housing core may lose some or all of their land, resulting in a loss of livelihoods, perhaps leading to poverty unless alternative farm land is available or alternative livelihood strategies can be developed. Insufficient information exists, however, on the reasons why a chief decides to initiate the preparation of a village layout plan, or on the priorities of the district assemblies in selecting villages requiring village layout plans, or on the factors underlying the choice of where the layout plan is located. Little information also exists on the spatial distributions of family lands within villages, the allocation of land to individual family members, and the degree of fragmentation of family land between the periphery of a village and areas adjacent to land used for housing.

Land Prices

In addition to variations in land being demarcated and sold for housing purposes, the VCS found substantial variations in the prices paid by strangers for a plot of land, ranging from 7 million cedis down to 10,000 cedis. Market pressures in villages closest to Kumasi have meant that eight of the urban villages charged the same price

per plot for indigenous people and strangers. Land valuers do not appear to be involved in establishing a fair or market price, but both chiefs and buyers are believed to be aware of plot prices being paid in neighbouring areas.

Compensation
Holland et al. (1996:36) describe how compensation for loss of farm land as a result of reallocation of land varies from village to village. If land is still available for farming, then substitute plots may be found. When compensation is paid, it is paid by the purchaser to the farmer, compensating for standing crops only. In most villages, it appears that women have received no compensation. Further information on how compensation and plots are allocated within families and what benefits are received by those who were using the land could be usefully sought.

Who gains and who loses?
NRI and UST (1997:25-27) identify who gains and who loses from the sale of land. They note that the changing land control may have more detrimental effects on women than men as women have little say in decision-making on land matters and that more of them tend to remain in farming in peri-urban areas than men. These women also lose out by having fewer opportunities to diversify their livelihood sources.

Although chiefs gain financially in the short term, they may be losing out in the longer term, as they are effectively undermining their traditional power base, which was based on both land and their people. Losers tend to be poorer individuals, those living in the community but not having strong family connections. Women who have smaller plots closer to the centres of their villages tend to be the first to suffer land losses. District Assemblies also lose out on sales of land by chiefs as they often do not receive the stipulated 55% due to them. In Tamale, Abudulai (forthcoming 2001) notes that those who are illiterate lose out from land transactions as they often think that 'pillaring' (the surveyors pillars which mark out building plots) and 'opening a file at the Lands Department' constitute a secure title to their land.

In Tamale, Abudulai's respondents reported "a deep sense of suspicion, anger and anxiety over the manner that land is disposed of by chiefs and opinion leaders" (ref) and they called for a return to the former rules of the Council of Elders.

Access rights to land and agricultural productivity in the PUI
Changing land tenure is assumed to influence farming practices within the peri-urban areas. Mattingly (2000:201), however, suggests that it may be the speed and unpredictability with which changes in the possession of rights are implemented rather than the traditional land management system that leads to a lack of investment in land to support agricultural productivity. He suggests that the rate of urbanisation may be more important as a factor in the "maintenance of agriculture, tree growing and animal husbandry of land affected by the peri-urban interface". Additionally, other factors, such as access to credit, cost of casual labour, other casual work opportunities or inadequate access to markets could influence decisions over cropping systems and investment in agriculture.

Research by Place and Hazell (1993) on land rights and agricultural productivity involved applying econometric modelling to data collected from households in Ghana, Kenya and Rwanda. The research revealed that "with few exceptions, land rights were not found to be a significant factor in determining whether or not farmers made land-improving investments or used yield-enhancing inputs" (1993:16-19). They hypothesise that there are likely to be more binding constraints on agricultural productivity, such as lack of improved technologies or inadequate access to credit.

Their research did not, however, focus on the peri-urban situation, but does highlight the need to look beyond use rights of land when exploring productivity of agricultural land. In the case of peri-urban Kumasi, where poorer women are more likely to remain in farming than men, access to credit and technologies may well be greater constraints on improving productivity.

Quan (2000:35) suggests that whilst customary land tenure is believed to provide poor incentives for land investment by the farmer, empirical evidence "tends to refute this pessimistic view of customary tenure". He goes on to observe that "the introduction of individualised titles, by contrast, has in practice benefited powerful private interests, creating opportunities for land concentration in the hands of political and other local elites". This issue is taken up by several other commentators.

Policy interventions

A major disagreement that runs through the literature and reports about land transactions in the Ashanti region is between

a) those who feel that the present system of stool lands has some merits for livelihoods and poverty reduction, and
b) those who see it as inequitable, and therefore would like to see it replaced.

For those favouring continued control by stool chiefs, it is argued that while they consistently benefit from their control over most land transactions (and especially in the PUI of Kumasi), they are ultimately 'accountable' to their subjects, and so they cannot systematically exploit them. The alternatives to the traditional system – for example land nationalisation or an open market where land goes to the highest bidder (as in western countries) would be far more inequitable. Kasanga (refs.) supports a strengthening of the stool land system, arguing that an accountable chieftancy, combined with better and more efficient government bodies, can deliver an efficient land allocation system.

Among the stronger critics of the traditional stool system, Amanor (1999:147) argues chiefs do not usually have the interests of marginalized groups (particularly 'youth') at heart.

If policymakers in Ghana do not modify traditional institutions, Amanor and others suggest, there is a danger that traditional leaders will still be capable of "imposing coercion" on members of the community and "closing down debate in the name of custom, values and norms" (Amanor, 2000:22). The policy solutions therefore, revolve around better community structures for land management – perhaps building upon the more positive aspects of the committee structures put in place during Ghana's revolutionary period in the 1970s. He argues the state should help to facilitate "the evolution of indigenous land markets and community structures than can participate in land administration". There must be cheaper ways to challenge leaders or land owners than the costly court system.

According to this perspective, the government should not engage in land titling schemes, which run the danger of the state itself becoming more powerful through its control over land registration permits. As a general solution, he says "the alternative [to market based rural commodification] is to stop playing disingenuous intellectual games with an anachronistic concept of traditional land tenure and to define the land question by reference to contemporary people - the poor peasantry, women and the youth, who make up the majority of the rural population" (Amanor, 1999: 147).

Sara Berry in her latest work, takes a slightly different line. She does not offer direct policy recommendations, but argues that whatever new systems to manage land have been put in place by the state or by donors since the last century, chiefs still ensure that they continue to exercise power over land. If land titling and registration, nationalisation, or some form of regulated privatisation were to go ahead, they are unlikely to relinquish control easily.

It seems that whatever way the fate of individual farmers in peri-urban villages around Kumasi is decided, they often lose out from a system that does not recompense them adequately for land that they have 'leased' from the chiefs. Stool chiefs almost always take the major financial benefit, in the event of a sale of farming land for housing or other development.

It is important that better mechanisms are developed for dispute resolution, as Amanor has argued (2000). Fred-Mensah (1999) advocates Land Conflict Mediating Committees (LCMC) based on the community tribunals proposed at District level under decentralisation legislation. Membership of these community tribunals are open to traditional rulers and 'persons of high moral and proven integrity'. He suggests LCMCs should consist of a flexible membership, changing according to the individual dispute, consisting of a judge, his/her appointee, elected representatives, a traditional ruler, a chief of a migrant community, and the head of lineage on whose land the dispute is occurring.

Conclusions and recommendations for further research

At the end of Phase 1, it was concluded that much background and generic information had already been gathered on land transactions (Annex D), but that the information is of a too general nature and has not looked specifically, and in detail, at the impacts of the types of land transactions on the poor. Little further knowledge can be gleaned in this area from existing information.

From the above review, therefore, and in relation to the key issues raised in the assessment criteria, a number of areas for further research have been identified.

1. *Role of agriculture in the livelihood strategies of the poor*

Is maintaining access to land for agriculture important for the livelihood strategies of the poor in peri-urban Kumasi?

2. *Compensation*

How much compensation is paid, to whom and more details on who loses out (this could vary according to relationships within and between families and chiefs for example)? Certain members of the family may have privileged access to compensation (e.g. male household head may receive it and their wives may not).

4. Increases in and changes to the forms of temporary land transactions such as cash rental, sharecropping, loans

We know there are more sharecropping, temporary borrowing and cash rentals in villages close to Kumasi, but there are many different forms of these arrangements and some forms may be more prevalent amongst the poor than others. We have no clear idea how land transactions have been changing and whether these indicate that poor people, in particular, are detrimentally affected through, for example, changing relations between landlords and tenants.

4. *The planning process*

Chiefs have to finance layout plans and so therefore have much control over them. Often they do not even show the plans to unit committees. There is a lack of

consultation on decisions and plot layouts. In the absence of good planning mechanisms, have people been seeking to formalise their claims to land and through what institutions? Are poor people disadvantaged in relation to these institutions?

5. *New institutions*
More work is needed on new institutional structures such as Land Allocation Committees, the Asantehene Land Secretariat etc, in order to find out how important they are, how they function, and people's perceptions of them. It would also be useful to search out innovative examples of best practice and document them (eg. Gwabre). The effects of the new national land policy should be explored. How will it allow for equitable land access and protection of rights *in practice*? Whose rights does it favour? What mechanisms are envisaged to implement it? How many people are really aware of its existence? How participatory was the process of its formulation? We already know that the chiefs feel they are not being kept informed and have not been involved enough in the process of its formulation. One of the key questions should be concerned with whether and how the poor can access, and are affected by, such institutions.

4. *Distribution of family land*
How is land distributed within families? What factors are taken into consideration in decision-making processes?

3.1.3.1. Further work on land transactions

During Phase 2, further work was conducted, as described in the section on Research Activities. The Outputs from that work are described in the following sections. This section is expanded upon in Annex E.

Customary principles of access to land among the Asante

These principles are set out to provide a background for understanding why land is transacted as it is around Kumasi.

Family members access land through their family heads. All family members are entitled to use-rights to family land. The land can be used as long as it is required by the user and can be inherited under the matrilineal descent system. If land is required which 'belongs' to another clan or family, then it can be requested from them.

Strangers to a community can request access to land from any landholding family head. The terms of use will be negotiated between the stranger and the family and may entail 'drink-money'. Use-rights on this basis cannot be inherited without the permission of the family

Land is managed by the traditional authorities. In many cases this will be the chief, but some villages have different ways of doing things. 3 cases studies will be presented.

Disputes over land are settled either by the clan heads, the chief, the 'superior' chief, an 'arbitrator' chief or the Asantehene's traditional council.

Case Studies of Three Peri-urban Villages and their Traditional Institutions through which Access to Land is Managed

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a) Land Allocation rests with Chief and Clan Heads - Aburaso

There are 3 clans at Aburaso - the Okoana, the Aduana and the Oyoko. The Okoana clan is the Royal family. The other clans however have their respective clan-chiefs. A layout plan for the village has been prepared. The village chief (the Odikro) allocates land within the village.

When a plot of land is allocated, the allocation note is signed by the chief and witnessed by the Abusua panin of the Royal family. The proceeds from the sale of land is shared between the chief and his superior chief (Anyaasehene) in the ratio of 2:1. Generally, the proceeds should be shared thus: I/5 to the chief as a person, 1/5 to the stool, 1/5 to the elders and the rest to the village - for development purposes. However, as the chief explained, after giving out the 1/3 to the superior chief, the remaining two-thirds go to the chief and the Abusua panin. The chief however helps in village development by contributing financially to various activities.

Land allocation at Aburaso seems therefore a typical case of "land 'belongs' to the Asantehene and is being held in trust by the Odikro". There is no Land Allocation Committee. Every land transaction is between the chief, the Abusua panin and the prospective buyer.

The other clans in the village are disputing the legality of the access to their family land by the odikro in terms of access to housing plots. The Aduana clan has just won 60 plots as their share of the village land. The other clan is still pursuing the case at the Asantehene palace.

Some family heads of the Okoana clan of which the chief is a member have been given plots. How these family heads allocate this land, or distribute the benefits is up to them. Some consider the allocation is personal and not for family distribution.

Elders within the Okoana clan were given plots after making a request to the chief. The indigenes who have lost land as a result of the layout did not benefit by way of compensation.

The decision about allocation of plots is considered by the chief as being 'not a matter for the whole community'. The loss of land is accepted by many people as normal because the individual is seen as not owning the land but having use rights only. The chief therefore has a right to take back the land when he wants it for housing development (physical development).

b) Land Allocation Rests with Clan Heads - Swedru

There are four clans in Swedru, three of which have 'landowning' rights. They are the Asene who are the Royal clan, the Okoana, the Aduana and the Asona. Members of the Asona clan however must request access to land through the Asuana (their patrilineal fathers). Swedru has no substantive chief as the chief has been destooled. The village is now being managed by a caretaker chief. This has led to clan heads deciding to allocate their own lands. Swedru has no layout yet but, at the moment, a layout is being prepared at the District Town Planning Office. When this is approved, the allocation of land will be decided by the Abusuapanin of the respective clans in conjunction with the caretaker chief and the Unit Committee.

The Swedru case shows how land can be managed by families. Every plot of land sold therefore will pass through the Abusua panin of the clan who 'owns' the land. It seems that Swedru family heads are accountable to the members of their family and can be taken to task. The family head cannot therefore squander the proceeds of land sales without accounting to the family which farm on that land. Individuals who lose access to their farming land expect to enjoy some form of compensation. How the proceeds should be shared among the stakeholders is being worked out by the chief, elders and the Unit committee.

The land for sand winning is also an example. The land is first given by the clan head. The contractor goes to see the caretaker chief and pay some drink money. The transaction is witnessed by the Unit committee. The three people therefore give a contractual note signed by them to be taken to the District Assembly for a permit before the sand can be won.

The Swedru could become an example of how lands can be managed at the family level. People from Swedru say they have 'learnt from the past' and from the experience of other villages and want to manage their lands in a different way. It is worth noting here that this village has had the greatest involvement in the various peri-urban research projects, and it is possible that such engagement may have contributed to development of this more equitable land allocation system.

c) Land is Allocated by Land Allocation Committee - Esereso

This is a village where a formal institution dealing in land transactions exists.

Here the chief, in consultation with the elders and the Town Development Committee /Unit Committee established a Land Allocation Committee. The land allocation committee has been in place for over 5 years now. The committee manages the transactions and allocation of land. The chief however signs the allocation note and this is witnessed by the allocation committee chairman. There is therefore some form of transparency in the land transactions.

After the layout was prepared the chief decided to give every house two plots as a form of compensation for the loss of farm land and their livelihood. Also indigenes who have uncompleted houses were given one plot each to sell in order to be able to complete the buildings. The remaining plots were then sold out. The proceeds were then shared thus:
1/4 to the chief, 1/4 to the stool, 1/4 to the elders of the village, and the remaining 1/4 to the Unit Committee for village development.

No single individual has a right to sell land without the consent of the Land Allocation committee, whether he be the chief or the family head.

Those individual households who lost land, it is deemed that the method of plot allocation should have ensured some distribution of benefits.

Experiences and perceptions of the land allocation systems by those who have lost their access to farming land

Surveys of land allocation systems in the four villages produced a range of interesting views, shown in Table 3.5. Although the sample was purposive, and there is the risk that the views expressed may not be representative, nonetheless they are

opinions and experiences expressed by people who have to obtain their livelihoods within the existing system.

Table 3.5 Experiences and perceptions of the land allocation systems by those who have lost their access to farming land

Aburaso	• Would be interested in starting farming again if access to land • No consultation or compensation. Land belongs to chief • Lost 20 acres. Very difficult to access land as almost all gone. • Land sold by family head and chief. No consultation or compensation. • Elders in family appealed at Asantehene's secretariat – still pending. • Farming has no future in the village • Lost 7 acres, hh food security affected. Better when husband got cocoa farm on sharecropping arrangement as can grow food crops • Lost 10 acres. No consultation or compensation. Money pocketed by chief with no accountability. • Informed by family head that land was demarcated for building. HH head shared compensation (of land) with them. • Land demarcated and pillared, expects to lose soon • All family land lost (50 acres), farming on undeveloped plots • No consultation/compensation. Not a fair process, only privileged have access to land.
Swedru	• Farming land sold for housing. No consultation. Given 300,000c • There should be land allocation committee with representatives from families. Layout should be prepared. • Anticipates loss of land to housing. Lost 4 acres to sand winning. No compensation. Land cannot be reclaimed. • Lost land to housing, to a stranger and to sand winning. No proper documentation for land acquisition. Was informed by family head but no compensation. Should be a land committee for negotiations of land sales. • Lost 5 acres to housing and sand winning. Given some money as compensation. Now Unit Committee has right to allocate land but no land allocated yet.
Apatrapa	• No consultation or compensation. People should be informed of land transactions and allowed to farm/harvest before development takes place • Lost all land. Uncle gave cocoa farm in WR to share with sister & cousin • No consultation or compensation. Appealed to queen mother, no success • Lost all land, 7 acres. Father gave land outside district. No consultation or compensation. Sold by queen mother. Unfair process. • Lost all land, 13 acres. Farming on undeveloped housing plots. No security. Land only available in WR or BA. No compensation or consultation. Queen mother sold land, unfair. • Lost all land, 4 acres. Farms on undeveloped housing plots. Unfair, should be transparent and be informed. • Lost all land, 2 acres. Tried sharecropping but land is scarce. • Lost all land, last plot 5 yrs ago. Land just cleared with no warning. New land scarce. No consultation or compensation. Land cleared within 3 days. • Lost all land. No compensation or mutual support. All land being sold.

Duase	• Some sold by chief, expects to lose the rest. No consultation/compensation • No consultation or compensation. Did not appeal. Process not fair, should be informed • Husband has land from mother's side which goes back to family after death, so not for his children. • Lost all land. Rents land on undeveloped housing plots. Land sold by sister, no compensation. Land in control of mothers who give to daughter • Land scarce and labour expensive. Farming risky & low returns. • Loss can happen any time, lucky up to now due to land litigation. Not expecting compensation. • Lost all land. No land available for renting/sharecropping because of litigation • Lost all land. Sharecropping not profitable, high labour cost. No compensation yet but family head will argue with chief, but he may not share it if compensated. It was family land so doesn't expect anything • Lost all land. No consultation, sold by family head, nothing given to family members. New land scarce, no security. Royal contacts important to access land.

The institutional and legal framework for land management

Introduction : Transition and opportunities

Both the state level institutional arrangements and the legal framework are in transition due mainly to the change of Government in January 2001. The customary level institutions are equally in transition but for different reasons. The transitional nature of the legal and institutional set up do, however, present some potential opportunities to overcome some of the apparent problems of land administration and management in peri-urban areas.

Opportunities : Constitutional and Land Policy reforms

The 1992 Constitution which generally governs land tenure and land holdings, as well as the Local Government Act 1993 (Act 462) which provides the legal framework for decentralised planning and development, are both being suggested for amendments. In 1999, a Land Policy document was launched by the NDC Government. Since then, no concrete law was passed towards its implementation. The new Government is committed to implementing the new Land Policy, which will provide an enabling Act and environment for sustainable development. If the amendments to land issues in the Constitution and the new Land Policy could be effected through participatory processes, an enabling, institutional and legal framework could set at the national level.

Local level initiatives and opportunities

The Asantehene, Otumfou Osei Tutu II, has since his enstoolment demonstrated positive local level initiatives towards restoring confidence in customary law principles. Typical actions include:

- Directives that all land and chieftaincy disputes should be removed from the regular courts for traditional court settlement. This has drastically reduced outstanding land and chieftaincy disputes in the Kumasi Traditional Council Area.
- The setting up of various advisory committees including land administration to improve land administration and sustainable development generally

- The organisation of a workshop in 2000 for chiefs and the general public on Land Use Planning and Environmental Degradation to draw awareness to problems of rapid urbanisation, environmental degradation, landlessness and homelessness.
- The revamping of the Asantehene's Lands Secretariat towards more effective land management and the restoration of customary land law principles: the protection of all stakeholders; the equitable sharing of benefits; compensation for the loss of interest etc.

3.2 Output 2 Poverty and Livelihoods

Better understanding of livelihoods of the poor in the PUI, specifically:
2.1 Characterisation of the poor and the poorest
2.2 More knowledge of livelihood strategies identified, in relation to access to mediation and combination of assets, as influenced by urban development

A synthesis and assessment of research carried out under the KNRMP was embodied in the Final Technical Report of the *Consolidation of existing knowledge in the peri-urban interface system* (R7549). This report highlighted a number of important gaps in knowledge generated through the KNRM Project, relating to the understanding of poverty and livelihoods in the peri-urban interface.

- Whilst the poor have been adequately characterised at the village[3] level, the distinction between villages is not clear, as the wealth ranking was carried out on a village-specific basis (R7549, FTR, p.18)

- Whilst food crop farmers were found to be amongst the poorest of the peri-urban dwellers, the determining factors of poverty have not been identified (R7549, FTR, p.18)

- The determination of common indicators would have enabled a comparison of relative levels of wealth and poverty between areas. For example, what proportion of households in each village are able to a) meet their basic needs b) meet their higher needs c) exceed their needs for sustainable livelihoods and even save (R7549, FTR, pp.18 & 19)

- There appears to be high unemployment in some villages, although no definition of unemployment was supplied (R7549, FTR, p.18). Levels of unemployment might be used to determine wealth- although may run into problems of definition and seasonality (R7549, FTR, p.19)

An introduction to the livelihoods approach and a summary of livelihood status in peri-urban Kumasi was given in a paper for the final workshop of the KNRMP R6799 *Changes in Livelihoods in Peri urban areas of Kumasi.* General trends in access to assets over four study villages are well described - the depletion of natural capital through the sale of land for housing development with consequent insecurity of tenure, details of housing types and access to water and electricity, the relative importance of farming compared to occupations. However, the distribution of land losses and compensation, access to services and occupations by gender or age were not explored. Among the activities recommended by the workshop was further work on the definition and gender dimensions of poverty in the peri urban and rural

[3] "Village" has been used in preference to "community", although the latter term was used in the FTR. The village as a geographical and administrative entity was the basis for the village characterisation survey (66 villages) and the household survey (4 villages) and does not assume the existence of norms of group solidarity.

areas around Kumasi. In Appendix 6 of the Knowledge Consolidation Project Final Technical Report (R7549), on Livelihoods around Kumasi, the additional gaps identified concerned the changes in the asset status of men and women with urbanisation, and on non-farm employment alternatives. Recommended areas for further investigation included;

- Information on household decision making and gender analysis to allow understanding of patterns of access and control over assets within a household, e.g. on the disposal of land, and changing responsibilities with urbanisation. How these factors differ between households according to wealth levels.

- Access to and uptake of services such as water, electricity, sanitation, health care and education. Disease and pollution incidence with urbanisation.

- The current status of traditional networks and customary leadership

- Livelihood strategies and ability to diversify, both short and longer term. Current systems for the provision of start up capital and skills for entry into sustainable employment. Access to credit and apprenticeship schemes. Non farm employment opportunities, markets, growth industries and the possibilities for promoting village based industries. The potential income generating role of natural resources.

3.2.1. Characterisation of the poor and the poorest

The first phase of this work (see Annex G) centred around a review of existing qualitative and quantitative data - in both raw and report form, in order to:

a) obtain a fuller characterisation of the poor through reviewing relevant KNRM project surveys

b) determine whether certain 'self defined' and 'externally-defined' indicators of wealth and well-being indicators can be used in cross-village comparisons, and to make 'generic-type' statements about the poor in peri-urban Kumasi

c) establish a link between the households identified as 'poor' and 'very poor' in the wealth ranking exercises and the data collected during the village characterisation survey, in order to construct a detailed picture of the poor/est, including; demographic characteristics, access to housing and services, tenancy/ rents, education/ training, farmland and employment.

Characteristics of poverty

The Ghana living standards survey found that half the rural households in Ghana (during the 1998-99 period) were 'poor', and that the proportion of 'poor' and 'hard core poor' households in Ashanti region as a whole were approximately 62 per cent (38 and 24 per cent respectively) of the population. The wealth ranking exercises conducted in four villages of peri-urban Kumasi, produced similar findings; with the mean percentage of those characterised as 'poor' and 'very poor' reaching 53 per cent (ranging from 49 per cent in Aburaso to 57 per cent in Apatrapa). In view of this, albeit indicative, statement of the levels of poverty within peri-urban areas of Kumasi, it is proposed that the strata being focused upon and characterised can be considered both 'the poor' and 'the poorest' amongst peri-urban dwellers; i.e. the 'poor/est'.

A review of the wealth ranking data has revealed that the poor/est are characterised by village informants largely in terms of their occupation, and their access to assets; whether physical, natural, human or social. There was a substantial level of

consistency regarding the 'first level' characteristics of poverty. The village characterisation survey data were explored to establish whether these characteristics were generalisable across peri urban Kumasi.

A great disparity was apparent between the urban villages where people were predominantly not engaged in farming, and the rural villages where few were not farming.

The qualitative surveys carried out in four villages in peri-urban Kumasi identified a number of non-farm occupations predominately carried out by the poor/est individuals and households. The village characterisation survey (VCS) confirmed the prevalence of these activities across the peri-urban interface, notably trading – practised predominately by women, construction and manual labouring practised predominately amongst the men in the urban zones of the PUI. The production and sale of alcohol and tailoring/ dressmaking were identified as further activities in which the poor/est engage, the former primarily in the rural and peri-urban zones, the latter amongst young women across the interface. In addition, local and migrant sources of farm labour were identified particularly within the rural and peri-urban zones, and the key occupations of the poor/est individuals and households were specified.

Whilst the nature of the VCS data does not enable a qualification of the characteristics of the poor/est identified in the qualitative surveys, it has given an indication of their prevalence across the peri-urban interface.

Access to assets

In addition to occupation, the poor/est have been defined by their lack of access to key assets and social infrastructure. The cross-comparison of village-level data from the VCS with the characteristics identified in the qualitative surveys has presented a fuller picture of the poor/est in peri-urban Kumasi.

The presence of and access to physical capital assets within the peri-urban interface was variable, with the more rural villages (and populations) substantially worse off in terms of availability of, and access to communications, services and certain forms of enterprise. The number of commercial and agricultural processing enterprises were higher in more urban villages. Likewise, the depletion of natural capital and the loss of family ownership has been more pronounced amongst the rural populations, although this may be a process that has already swept through what are currently the 'urban' villages within the peri-urban interface.

In relation to human capital, access to schooling, medical facilities and drinking water are less clear cut in terms of a declining access with rurality, with access to services amongst the villages greatest within the peri-urban zones of the peri-urban interface. The 'tailing off' of access amongst the 'urban' villages may reflect nearness to the urban centre of Kumasi, and the services therewith, which if the case, may in fact represent greater access to services.

The investigation into social capital suggests that the urban zones of the PUI in fact have the lowest level of social capital, with the peri-urban and rural zones more active in this area. Despite these figures, investigation into the family case studies and village based organisations study revealed that the poor/est are by-and-large excluded from group membership and other forms of social capital-building arrangements, although some benefit from the hand-outs of village members.

Livelihood strategies and outcomes

The focus of livelihoods analysis under output 2.2 of this project was on patterns of access to capital assets and the livelihood strategies of different gender and age groups in urban, peri-urban and rural villages. Two main sources of previously unanalysed data were used; the family case studies (typescript of field notes) and the household survey (in Access data base). The family case studies contain detailed interviews with all adult members of extended families, selected across different wealth categories, with the purpose of exploring their livelihood patterns and linkages. The household survey contains data on all households in four villages in the Kumasi area, one defined as urban, two peri-urban, and one rural.

A systematic analysis of the family case studies was undertaken to obtain a better understanding of the dynamics of people's livelihoods, and to identify any patterns emerging in terms of access to assets and occupations according to gender, age and village type (urban, peri-urban and rural). This analysis was contextualised with general information on all four case villages, derived from the PRA, the VCS and the household survey.

Access to capital was assessed for each respondent. Four degrees of access were established, and criteria for these were defined – 'no access', 'low,' 'average' and 'good access'. The findings complement the broader information from the VCS and the quantitative data on the household survey, on the levels of capital assets and provide additional insights.

Village level assets and livelihood strategies

Access to family land is still the most prevalent channel for acquiring farms, although sharecropping, renting and borrowing are becoming more common. Access to land is related to marital status, the majority of men and women who had access to land were married. Good access to land within the village is related to high socio-political status. Kinship links are important in securing access to land by the younger group. The average farm size for households in the four study villages is less than 1 acre (for land within the villages). The amount of available land is greatest in the rural village, Swedru. A strategy to cope with land shortage, particularly by the older generation, has been to acquire land outside the village. Those with land elsewhere usually had larger areas of land, around 5 acres or more.

Farming has shifted from being a major to a minor occupation, especially for the younger generation. However, those involved in vegetable production (especially in Swedru), oil palm, cocoa and citrus plantations were perceived as doing quite well. In the main, farming is combined with other activities such as trading, carpentry, shoe making, wage labour and salaried work. The older generation has less diverse income sources and is to a larger extent dependent on farming. Urbanisation has reduced access to collected NR products such as fuel wood or non-timber forest products.

Social capital is important in accessing different forms of assets. Forms of support include accommodation, food, money, support for children, resources for training, and starting capital or equipment for a business, shop or trade. The most important relationships providing support are parents-children, in-laws, siblings, friends and contacts established through trade and employment. The family case studies suggest that for indigenous families, most support is received from local relatives, while outsiders who have no local kin support, rely on friends and other contacts. The important role of social capital in mediating access to livelihood opportunities is clear, however, there is a lack of information on how people perceive the importance of social networks, the value of extended families and whether these values are

undergoing change. Existing data on community groups do not reveal to what extent people benefit from such membership.

The younger generation generally has higher levels of formal education, training and apprenticeships compared with older people, especially women. A wider range of training and apprenticeships are undertaken by men compared to women, and a higher proportion of men are engaged in formal employment/education. There is a problem of unutilised training, particularly among young women, few of whom actually completed their training or set up a business. There is no straightforward association between people's access to human capital and their actual well-being. Access to starting capital, individual attitudes and the socio-cultural and economic environments are more relevant to success.

Information on physical assets from the family case study is mainly confined to respondent's housing conditions and to some extent access to tools and workshops. There is no information about individual ownership of electrical appliances, modes of transport, nor on individual access to electricity, sources of water, school, and health services or individual perceptions of the adequacy of such services.

Access to financial capital does not differ greatly between the younger and older generation but the nature and combination of financial assets vary to some extent. Older people's financial capital is more often confined to property ownership, salaried employment (past) and investments in natural capital. More information is needed about profitability of different activities and the actual intra and inter household cash flows in relation to the dependency ratio before any substantial conclusions can be drawn about financial capital.

The trend is toward diversification of livelihood strategies, especially for young married people. Single people are generally more restricted in their options as they generally have less access to land and fewer resources. Older people who no longer farm are highly dependent on their children for labour and financial support. Food crop farmers, landless and casual labourers are perceived to be among the poorest, followed by petty traders, self employed, workshop owners, store keepers, business people and those with a salaried income. The peri-urban villages show a more diverse picture of livelihood strategies and opportunities.

Conclusions

A re-evaluation of the qualitative and quantitative data from the KNRM Project has enhanced the characterisation of the poor/est in peri-urban Kumasi - identifying them both in terms of occupation and access to capital assets. The use of quantitative data from the sixty six village characterisation survey to cross reference the qualitative data has added to the knowledge, particularly in terms of giving an indication of the breadth of poverty, and the poor/est across the peri-urban interface of Kumasi.

However, the connections made between the individual or household level and the village-level data is not statistically grounded, but based on inference and assumption. In addition, the nature of the VCS data prevented intra-village analysis, thus the location of the poor/est within the villages surveyed is only, at best, implied.

The reports and data from previous peri-urban projects give a useful descriptive characterisation of poverty and livelihoods, but did not go very far in characterising the distribution of poverty or the dynamics of livelihood change. The information in the family case study interviews did not include much detail on overall trends or individual's interactions with formal and informal institutions. Hence the analysis has

a rather stocktaking character, offering little insight into the dynamics that constitute people's livelihood strategies.

The work in phase one of the current project has increased understanding of the distribution of the characteristics associated with poverty, an improved understanding of individual's access to assets and an indication of differences and similarities of opportunities and limitations, based on gender and age. However, further work is required for broader comparisons of poverty and for further exploration of livelihood strategies and outcomes.

In terms of an analysis of livelihoods, a weak area is the relationship between institutions and policies, for example those connected with land, tenure and employment, and household level circumstances and choices and how these institutions affect the dynamics of livelihood change. Therefore, it is difficult to develop a sense of what makes certain families particularly vulnerable, while others can withstand the shocks of land dispossession and financial hardship. The family case studies do not trace personal histories, or the nature of adaptations made to urbanisation, loss of land and economic hardship. Examples of coping strategies might include asset stripping, drawing down on social and financial capital or short term or permanent migration.

A second area of omission relates to the social and cultural context within which livelihood opportunities and preferences are generated. A number of aspects of urban and peri urban Kumasi are indicative of important transitions in social norms and values. Examples are the traditional role of the chief in relation to land, the role of the council of elders, the forms of marriage and obligations towards spouses and children, and changes in gender roles under conditions of economic constraint.

The different sources of data agree in recognising the close association between food crop farming and poverty. Loss of land is threatening this already vulnerable group, and there appears to be limited capacity at village level to mobilise activity which would allow for expanded livelihood opportunities. Hence one of the priority areas for further research is to investigate alternative opportunities for such people. Very little is known of the conditions of production, profitability or the market for the main occupations cited, including natural resource based activities, both those associated with the better off and those closely aligned with the poor.

There is no opportunity from the village level studies to indicate the extent of food self provisioning, or whether the transition to diversified occupations outside agriculture compromises food security or conveys greater security and choice for men and women of different age groups. The data does not provide detail on how access to specific areas and locations of land is actually decided. The actual geographical location such as uplands, near streams, close to, or far from built up areas, was not specified, although this has implications for farm management decisions and for security of tenure. There is limited insight into how changes in land access and distribution impact on people's livelihood strategies.

There is not very much material incorporated in the previous project documents, on the actual views of the poor or other stakeholders. Consultation was carried out through PRA and questionnaires, but little verbatim speech was recorded. It is important to look at different stakeholders preferences for various livelihood strategies. More information is needed on people's perceptions of farming, its socio-cultural value and the opportunity costs in comparison to other opportunities available.

3.2.2 Livelihoods and poverty review

A desk review was conducted as a component of Phase 2 of the project, the purpose being to present an overview of definitions, trends and characteristics of poverty and 'the poor' in Ghana as a context for understanding the specific circumstances of the peri-urban poor in Kumasi, Ashanti Region (see Annex F). Data collected on poverty and livelihoods in peri-urban Kumasi during previous projects were collated and reinvestigated during Phase I of R7854, concluding that "people's own perceptions of the relative poverty associated with different occupations and combinations of assets had not been [sufficiently] investigated." (Annex G). Thus, alongside additional fieldwork, a review was commissioned to provide an improved knowledge of poverty trends in Ghana, and an awareness of the key issues for the poor.

The broad definitions and trends of poverty and the poor in Ghana were investigated, using the Livelihoods Framework (after Scoones, 1998), to structure a more detailed assessment of the Ghana-specific poverty literature. The Livelihoods Framework helps to identify the different components and influences on the livelihoods of individuals/ households or communities, thus enabling an assessment of the role different factors play. The findings of the Phase I study of the characterisation of the poor and livelihoods in peri-urban Kumasi were drawn upon as a comparison to the broader findings from the Ghana-specific poverty literature.

Poverty in Ghana has been classified in several different, although complementary ways. Consumption poverty, the characteristic used by the Ghana Statistical Service (GSS) to develop a poverty line, can be drawn alongside more qualitative understandings of poverty defined by the poor themselves, including the inability to afford essential items, the lack of effective employment or the absence of access to basic services. The poverty line, constructed on the basis of nutrition, reveals that 40% of the population are poor (1998/99), a decrease from 52% in 1991/92. Yet, as confirmed by the findings of both quantitative and qualitative sources, this decline was not evenly spread across the country, with the rural savannah areas experiencing a rise in food poverty.

Recognition that defining poverty in traditional consumption and expenditure terms is insufficient on its own to address the needs of the poor has led to the inclusion of human and social welfare indicators in development indices and poverty alleviation programmes. Further, self-characterisation of poverty, gathered from the poor themselves, has become increasingly central to sector and programme planning, with the recognised aim of including these 'voices of the poor' not only in terms of illustrating their needs, but also in an interactive process of planning for development. Regional and District level consultations on poverty[4] in all ten regions of the country highlighted the key elements as defined by the poor themselves as:

- Inability to afford needs (food, shelter, clothes, health care and education)
- Absence of economic indicators, job, labour, crop farms, livestock, investment opportunities
- Inability to meet social requirements, e.g. development levies, funeral dues, participation in public gatherings
- Absence of basic community services and infrastructure such as health, education, water and sanitation, access roads and etc.

Within the specific context of Ghana, the most vulnerable to external shocks are the rural poor, who rely heavily upon their natural resource asset base, and are thus

[4] Conducted by Nkum and Ghartey Associates 2000 under the auspices of the National Development Planning Commission (NDPC) and the German Technical Co-operation (GTZ)

susceptible to environmental events, whether one-off, seasonal or part of a long-term trend, and the urban poor whose livelihood strategies primarily depend upon income-generation, and are thus vulnerable to economic shocks, such as currency collapse, inflation and unemployment.

The context of poverty for these rural populations in particular is characterised by environmental vulnerability, with irregular rainfall patterns compounding a natural resource base that is being eroded as a consequence of failing soil fertility and increasing population pressure. Consequential low yields and food insecurity require households to have reasonably diverse assets bases in order to follow alternative livelihood strategies. Whilst many rural households rely upon cattle as a transferable asset in times of crop disaster, the poor are often without, thus relying on other more extreme measures to survive; whether through labouring, borrowing or begging. Erosion of the natural resource base on which the majority of poor rural households depend is often further compounded by poor health, lack of education to diversify into other more productive livelihood activities, and lack of access to social networks (whether friends, government representatives, groups or enterprises) that may potentially enable them to gain access to finance and work opportunities. Disillusionment with poverty has been identified as leading to alcoholism and malaise, which further entrenches the individual and/or household in a cycle of ill-being.

Whilst a number of institutions were recognised as being important to rural livelihoods, the traditional institutions (particularly chiefs and churches) continue to play the key role in rural areas, both in terms of interaction with the people, and provide services (both physical and spiritual). Modern institutions, particularly utility agencies such as health, education and agricultural extension were considered important, but insufficiently accessible. Despite these many difficulties, particularly those relating to their core asset, land, livelihood priorities reflect a continued desire to specialise in agriculture, although recognising the need for diversification to cover the seasonal fluctuations and periodic poor harvests.

Although urban conurbations (including peri-urban areas) in general, and Accra specifically, exhibited decreasing levels of poverty over the 1990s, urban poverty remains in all urban areas and is increasing in the savannah regions. Where rural poverty (in an occupational sense) remains firmly linked to the natural resource base, urban poverty is multifarious, linked to un- and under-employment, and across a broad range of sectors, including petty trading, producing cooked food and artisanal self-employment. The asset base of urban dwellers varies significantly from their rural counterparts, with little or no access to natural capital, but potentially greater access to other forms of assets. As a spatial entity, the peri-urban interface exhibits strands of both rural and urban spheres, with natural capital the most contested asset as a consequence of urban spread and land privatisation.

Vulnerability in an urban context relates primarily to economic rather than environmental patterns and shifts, with consumption and occupation governed largely by the state of the economy. However, access to other key resources, such as healthcare, education and good housing depend primarily on access to cash employment, and thus the poor, characterised by un- or under-employment are the most disadvantaged. Within the peri-urban context, the characteristics of vulnerability appear to err towards the urban rather the rural, with economic change outweighing environmental considerations. More uniquely, although relevant in both rural and urban settings, lack of access to decision-making, and lack of control over events that shape livelihoods are fundamental to the process of land loss affecting the poor in peri-urban areas.

To urban dwellers, the institutions considered important related to their jobs, and those that enabled them to recover from the impact of shocks. In contrast to their rural counterparts, certain traditional institutions were viewed to have declined in respectability, with urban and to some extent peri-urban chiefs accused of selling off (and benefiting from) their lands. Modern secular agencies, such as the police and fire service were considered important in events that afflict all, but to which the poor are more vulnerable, notably theft and fire. However, whilst these agencies were felt to be important, urban dwellers expressed their disaffection over the lack of control they have over them, with district assemblies also viewed as being unresponsive to the needs of urban communities. Commonality between rural and urban preference was only apparent in religious institutions, viewed as important by both in responding to people's spiritual and material needs.

Across urban, peri-urban and rural areas, the poorest members of society are characterised as those with the greatest degree of vulnerability as evident by their lack of assets, and lack of options. Older women, the sick and disabled are typically highlighted as the most powerless, with the least control over resources that may or may not be at their disposal. Within the specific context of the peri-urban area (notably that of Kumasi), the elderly are characterised as those remaining in agriculture due to lack of livelihood alternatives, despite the rapid sale of land, which is eroding the natural resource base. Those in the most fortuitous position are young men, who are sufficiently skilled (due to traditional emphasis on male rather than female formal education) and flexible to engage in diverse, often informal opportunities that arise from the proximity to the urban centre.

Poverty study

In Phase 2. fieldwork was conducted to support the review of livelihoods and poverty. Discussions in poverty focus groups indicated that there is a strong association between illness and poverty (Annex H). The groups commented that people used to be healthier and also the disease spectrum has changed. Traditional medicine has "lost its potency" and many of the herbs are no longer found. Poverty is also strongly associated with loss of employment or loss of land. Poverty was considered more common among the elderly and single mothers with too many children.

Changes in social relations have also weakened family support systems*: "We used to be a very happy people. There was social cohesion, now there is disobedience on the part of the youth and no respect for tradition and the elderly."* This statement is indicative of the widely reported trend towards the disintegration of extended family structures. People do not eat together or support each other as a family any longer.

There was a strong sense that there were in many cases a direct personal responsibility for poverty, resulting from laziness and irresponsible lifestyles, particularly among men (Table 3.6).

What are the visible signs of poverty?

There was a high degree of agreement on the visible indicators of poverty: food, diet and clothing were prominent (Table 3.7). The factors are interrelated – lack of employment and cash makes it difficult for people to rent accommodation to escape overcrowded family houses, the absence of stable accommodation increases dependence on ready cooked purchased food, and creates difficulties in maintaining personal hygiene. The social consequences of poverty – social isolation and withdrawal- were more often reported by the women's focus groups.

Who are the most vulnerable?

The elderly, and particularly elderly men, were said to be poorer than the youth. Children remit money more often to mothers than to fathers and older men were perceived as having fewer acceptable job opportunities. The disabled and single mothers were also mentioned as among the vulnerable.

What are the ways out of poverty?

Getting out of poverty depends on finding a source of income (Table 3.8). Help from one's children or friends or concerned family members was seen as vital in this effort. The young men's groups in particular emphasised the importance of hard work in getting out of poverty. Older men favoured agricultural based activities. Other examples cites were to take a loan, buy on credit, sell and pay back, petty trading or rent or sharecrop land for farming.

What are the constraints to getting out of poverty?

Lack of finance was perceived as the main constraint (Table 3.9). The household survey analysis showed that young women have the highest percentage of unemployment, indicating that access to appropriate employment opportunities in terms of skills, location and financial requirements are more problematic for their group. Laziness was also indicated as a constraint.

What changes have had the most impact on livelihoods?

These were more village specific, reflecting differences in land access and occupational patterns. Changes in the extended family system have had an impact on livelihoods. Because of the reduced economic status of many parents, younger people are lacking financial support. Other changes cited were: employment opportunities are limited, high rents and lack of accommodation/high room densities, declining economy of the country, lack of start up capital and credit, poor market avenues, lack of access to land. Incidences of loss of land and litigation, and also the following natural factors; declining fertility of soil leading to reduced farm productivity and natural herbs/medicines are no longer readily available.

Table 3.6 What makes people poor? (from focus group discussions in 4 villages)

	Older men	Young men	Older women	Young women	Men commuters	Women Commuters
Sickness/ chronic illness	✓✓✓	✓✓	✓✓✓	✓	✓✓	✓✓✓✓
Laziness	✓✓	✓✓	✓	✓	✓✓	✓✓
Old age	✓✓✓	✓✓	✓		✓	✓✓
Loss of land	✓✓✓✓		✓✓		✓	✓
Unemployment/loss of job	✓	✓✓		✓✓		✓✓
Irresponsible lifestyle	✓✓	✓			✓	✓
Many children but no assets and funds			✓✓	✓		✓✓
Lack support of children/parents/family	✓✓	✓		✓		✓
Refusal to work in farming		✓✓				✓
Misuse of finances or properties		✓		✓		
Loss through natural disasters			✓			✓
Lack of start up capital		✓		✓		

Other factors: Wasteful spending, witchcraft, no one to help, poor management, lack of record keeping, having children without responsible husband

Table 3.7 Visible signs of poverty

	Older men	Young men	Older women	Young women	Men commuters	Women Commuters
Poor food, unbalanced diet, reliance on ready cooked food	✓✓✓	✓✓✓	✓✓✓	✓✓✓	✓✓	✓✓✓
Tattered, poor quality clothing	✓✓✓✓	✓✓	✓✓	✓✓✓	✓✓	✓✓✓✓
Unhealthy physical appearance, e.g. skin	✓✓		✓✓	✓		✓✓
Frequent begging		✓		✓✓	✓	✓✓
Poor accommodation, sleeping on verandahs or in courtyards, overcrowding	✓		✓		✓✓	✓
Poor or no furniture in room			✓✓	✓	✓	
No shoes/poor shoes			✓✓	✓	✓	
Unemployed		✓✓		✓		
Inability to socialise, no friends, isolation			✓	✓		✓
Inability to meet/provide basic needs			✓	✓		

Other signs include: Sickness, weight loss, poor facilities and cleanliness, lack of cheerfulness.

Table 3.8 Ways out of poverty

	Older men	Young men	Older women	Young women	Men commuters	Women Commuters
Find a job	✓	✓✓	✓✓	✓		✓✓
Having support from children or family members	✓✓	✓✓	✓	✓✓		
By hard work		✓✓✓			✓	
Construction work – masonry, water carrying, head loading		✓		✓✓		
Take a loan		✓		✓		✓
Buy on credit, sell and pay back				✓✓		
Hawking or petty trading.			✓	✓		
Serve as house help			✓	✓		
Agricultural labour				✓✓		
Rent or sharecrop land for farming	✓					✓
Help from a benefactor				✓		✓

*Other ways include***:** Disposal of property, selling on commission, casual labour, firewood selling, harvest, cook and sell food; assistance from churches; team work, formation of a cooperative; learn a trade or skill and use it.

Table 3.9 Constraints to getting out of poverty

	Older men	Young men	Older women	Young women	Men commuters	Women Commuters
Lack of finance/capital or credit	✓✓✓✓	✓✓✓	✓✓	✓✓✓✓	✓✓✓	✓✓✓✓
Lack of social support	✓✓	✓✓		✓	✓	
Lack of skill or training	✓✓	✓	✓	✓		
No access to land for farming	✓✓				✓✓	✓
Lack of stores/ stalls in market					✓	✓✓
Poor health in old age			✓✓✓			
Lack of job opportunities	✓				✓	✓
Laziness	✓					

3.3 Output 3

Output 3, although still included in the revised logical framework, was really only relevant to the end of Phase 1. Output 3 required that:

Research team and key stakeholders better informed on PU issues and are able to specify the required emphases of the research in Phase 2 of the project.

The above output was assessed in terms of the information produced during Phase 1, and whether the team had been able to reach a situation where the required emphases for the research in Phase 2 were able to be more clearly spelt out. Phase 1 was very necessary and useful in terms of drawing information together, revisiting original data sources from a different perspective (with a strong emphasis on understanding the livelihoods of the poor) and in developing a more integrated approach for Phase 2.

4. Outputs 4 and 5.

These are:

4. Better understanding of the role of natural resources in the dynamics of livelihood strategies of the poor, particularly in relation to:
- Urban influence
- Relative significance in relation to non-NR resources
- Response to in-migration

5. Better understanding of the processes of decision-making at family, household and village level, in relation to the role of natural resources in the dynamics of livelihood strategies of the poor.

In this Final Technical Report, it has been decided to treat these two outputs together, as during the fieldwork any division between these two would have been artificial.

4.1. How do the poor decide on livelihood strategies?

The key elements of the SL framework are:

- *Capital assets*: resources that help people survive and thrive (natural, social, human, physical and financial assets)
- *Vulnerability context*: things that the poor are vulnerable to
- Policies, institutions and processes: influence their livelihoods
- *Livelihood strategies*: how do people adapt and plan in response to threats and opportunities.
- *Livelihood outcomes and aspirations*: what are people's objectives and priorities?

The fieldwork conducted an assessment of the relative importance of natural, social, financial, physical and human capitals in determining livelihood strategies. In general, the research showed that there is a shift from NR based livelihood strategies to non-NR based strategies. For many of the peri-urban poor, a NR based livelihood strategy is seen as a last resort and/or a starting point to change to non-NR based, as shown in Table 3.10.

Key factors driving this change are:
- Loss of land
- Lack of tenure security
- Reduced soil fertility
- Alternative employment opportunities
- Cost of wage labour
- Changes in social values/preferences

Table 3.10 Percentage of non-NR based activities compared with percentage of farming as a major occupation

	Non NR Based	Farming	Other
Women <35 yrs.	56.6%	10%	33.4% (students/unempl.)
Women >35 yrs.	32.8%	50.1%	17.1% (retired/unempl.)
Men >35 yrs.	53.5%	7.8%	39.7% (students/unempl.)
Men <35 yrs.	42.7%	32%	25.3% (retired/unempl.)

NOTE: Above figures based on R6799 household surveys in 1997. It is very likely that percentage of non-NR based income generating activities has increased, given current land use changes in the four case villages.

It was found that access to social capital constrained by several factors, including: breakdown of extended family leading to heavy reliance on the nuclear family, which is again under pressure by changes in traditional marriage (e.g. high divorce rate). Several respondents lamented the loss of 'communal spirit', reasons given for this change being:

- Transition from rural farming community to a 'community' of city dwellers
- Increased mobility of people
- Monetarisation of economy
- Complexity of land transactions - land litigation

As noted previously in the poverty study, access to financial assets is crucial for several reasons:

- To secure household food security, dependent on buying food from the market
- To provide for starting and operation capital to generate an income
- Ability to buy physical assets needed for income generating activity such as shoemaker tools or hair dressing materials
- To join social groups such as Women Fellowship to ensure support if in difficulties (funeral, childbirth) and to enjoy social interactions
- To pay for education and vocation training for future generations to survive and to support their parents when old and needy

Examples of physical assets which are considered to be important include:

- Equipment needed for specific occupations, i.e. cooking equipment for cooked food sellers, tools for carpenters and shoemakers and sewing machine for seamstress
- Transport: cheap and reliable (i.e. commuters and traders)
- Good housing and sanitation conditions to ensure good health
- Food safety, i.e. access to clean water for cooked food sellers

Human assets also played a crucial role in livelihood security. The link between poor health and poverty emerged on several occasions. Wiith the breakdown in traditional social structures, good health and survival has become mainly an individual responsibility, illness and old age make people more vulnerable to poverty. Another oft cited factor was education and vocational training to enable people to be in a better position to take up of non-NR based livelihood strategies, e.g. car mechanic, driving licence, hair dresser or tailor.

Examples of livelihood strategies

- Diversification of income generating activities, i.e. a mix of non-NR based livelihoods and NR based livelihoods farming contributes to household consumption, selling cooked food and skill based occupation like carpentry.
- Access to land elsewhere, e.g. cocoa farm/oil palm plantation in the Western Region
- Investment in education and vocational training, preference for children to be educated/trained
- Casual labour, e.g. at construction sites
- Petty trade to generate capital to invest in other more preferred trade, e.g. selling oranges requires little starting capital, profits invested in e.g. trade in more durable goods or to obtain a stand and move away from hawking.

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APPENDIX A ORIGINAL LOGICAL FRAMEWORK

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Goal			
Natural resources management strategies for peri-urban areas which benefit the poor developed and promoted	By early 2001 in Kumasi city-region, key stakeholders (including at least two target institutions) regularly participating in the formulation of plans of action for at least two aspects of natural resources management for peri-urban areas which will benefit the poor.	Reviews by programme manager. Reports of research team and collaborating/ target institutes. Appropriate dissemination products. Local, national and international statistical data. Data collected and collated by programme manager.	Target beneficiaries adopt and use strategies and practices. Enabling environment exists. Budgets and programmes of target institutions are sufficient and well managed.
Purpose			
1.3 New knowledge base created to fill any critical gaps in existing knowledge bases for use in developing pro-poor plans of action	By project end: Knowledge base adequate for formulation of plans of action for at least two aspects of NR management. Improved awareness of peri-urban natural resource management issues affecting the poor by key stakeholders. Engagement of at least two target institutions in pro-poor dialogue with key stakeholders.	NRSP Annual Report End of project stakeholder workshop proceedings All project workshop proceedings and project reports. NRSP Programme Management project review report	Policy environment remains conducive to pro-poor approaches Target institutions accept and make use of project's research findings
Outputs			
PHASE 1 1. Better understanding obtained of changes in the PUI and their implications for the dynamics of livelihood strategies. Specifically: 1.1Land use changes as driven by urban influence. 1.2Temporal and spatial changes in crop and livestock systems – including post-harvest – driven by urban development 1.3Improved understanding of changes in land transactions (including formal and informal arrangements, market changes, temporary renting and leasing, etc.) and their associated institutions. 2. Better understanding of livelihoods of the poor in the PUI, specifically: 2.1 Characterisation of the poor and the poorest	Outputs narrative 1 and 2: By mid-project month 4, all factors specified in the narrative described and analysed. By mid-project month 4, findings of phase 1 assessed and need for further work described. By end of project month 5, detailed work plan for phase 2 agreed and submitted as revised RD1. By end of project month 5, outputs for 2nd phase of project defined in Phase 2 logframe.	Project Phase 1 report. Amended RD1 for Phase 2.	Sufficient knowledge to fill critical gaps available in existing data sources and through potential additional field work

2.2 More knowledge of livelihood strategies identified by access to mediation and combination of assets, as influenced by urban development 3. Research team and key stakeholders better informed on PU issues and are able to specify the required emphases of the research in Phase 2 of the project.	Ghanaian PUI specialists undertake research activities with UK team in Phase 1 in the UK. In Phase 1 workshop, representatives of at least one target institution acknowledge that they have gained new insights on the dynamics of livelihood strategies in the PUI as influenced by urban development.	Project files. End of Phase 1 workshop proceedings.	
Activities	**Budget and milestones**		
Phase 1: September 2000 – Jan 2001 Evaluation and selective analysis and synthesis of previously collected data through a stepwise process for the research team of: 1. Orientation: data familiarisation 2. Assessment of existing data 3. Analysis of findings and gaps 4. Revision of logical framework 5. Ghana workshop Phase 2: April – August 2001 6. Stratified sampling decisions 7. Additional fieldwork 8. Analysis and reporting 9. Ghana workshop	Budget: UK staff: Overseas personnel Overheads Overseas T & S Miscellaneous TOTAL Milestones: Mid-December 2000 End-December 2000 January 2001 End-May 2001	30694 2333 25482 22000 2742 83251 Assessment made of existing data; findings and gaps analysed. Detailed work plan set out for Phase 2 (to be confirmed at workshop). Workshop in Kumasi and initiation of research activities for Phase 2. Revised RD1 submitted. FTR submitted	Ghanaian PUI specialists able to come to UK. .
			Pre-condition

APPENDIX B REVISED LOGICAL FRAMEWORK

Narrative summary	Objectively verifiable indicators	Means of verification	Important assumptions
Goal			
Natural resources management strategies for peri-urban areas which benefit the poor developed and promoted	By early 2001 in Kumasi city-region, key stakeholders (including at least two target institutions) regularly participating in the formulation of plans of action for at least two aspects of natural resources management for peri-urban areas which will benefit the poor.	Reviews by programme manager. Reports of research team and collaborating/ target institutes. Appropriate dissemination products. Local, national and international statistical data. Data collected and collated by programme manager.	Target beneficiaries adopt and use strategies and practices. Enabling environment exists. Budgets and programmes of target institutions are sufficient and well managed.
Purpose			
1.3 New knowledge base created to fill any critical gaps in existing knowledge bases for use in developing pro-poor plans of action	By project end: Knowledge base adequate for formulation of plans of action for at least two aspects of NR management. Improved awareness of peri-urban natural resource management issues affecting the poor by key stakeholders. Engagement of at least two target institutions in pro-poor dialogue with key stakeholders.	NRSP Annual Report End of project stakeholder workshop proceedings All project workshop proceedings and project reports. NRSP Programme Management project review report	Policy environment remains conducive to pro-poor approaches Target institutions accept and make use of project's research findings
Outputs			
PHASE 1 1. Better understanding obtained of changes in the PUI and their implications for the dynamics of livelihood strategies. Specifically: 1.4Land use changes as driven by urban influence. 1.5Temporal and spatial changes in crop and livestock systems – including post-harvest – driven by urban development 1.6Improved understanding of changes in land transactions (including formal and informal arrangements, market changes, temporary renting and leasing, etc.) and their associated institutions. 2. Better understanding of livelihoods of the poor in the PUI, specifically: 2.1 Characterisation of the	Outputs narrative 1 and 2: By mid-project month 4, all factors specified in the narrative described and analysed. By mid-project month 4, findings of phase 1 assessed and need for further work described. By end of project month 5, detailed work plan for phase 2 agreed and submitted as revised RD1. By end of project month 5, outputs for 2nd phase of project defined in Phase 2 logframe.	Project Phase 1 report. Amended RD1 for Phase 2.	Sufficient knowledge to fill critical gaps available in existing data sources and through potential additional field work

poor and the poorest 2.2 More knowledge of livelihood strategies identified, in relation to access to mediation and combination of assets, as influenced by urban development 3. Research team and key stakeholders better informed on PU issues and are able to specify the required emphases of the research in Phase 2 of the project. PHASE 2 4. Better understanding of the role of natural resources in the dynamics of livelihood strategies of the poor, particularly in relation to: • Urban influence • Relative significance in relation to non-NR resources • Response to in-migration 5. Better understanding of the processes of decision-making at family, household and village level, in relation to the role of natural resources in the dynamics of livelihood strategies of the poor.	Ghanaian PUI specialists undertake research activities with UK team in Phase 1 in the UK. In Phase 1 workshop, representatives of at least one target institution acknowledge that they have gained new insights on the dynamics of livelihood strategies in the PUI as influenced by urban development. By end of March, the factors involved in influencing the role of natural resources described and analysed. By end of May, the influence of changes in institutions described and analysed. By end of May the relevant factors involved in the processes of decision-making and negotiation identified.	Project files End of Phase 1 workshop proceedings Literature review of perceptions of the poor Sampling frame for semi-structured interviews. Workshop proceedings. FTR.	
Activities	**Budget and milestones**		

Phase 1: September 2000 – Jan 2001 Evaluation and selective analysis and synthesis of previously collected data through a stepwise process for the research team of: 10. Orientation: data familiarisation 11. Assessment of existing data 12. Analysis of findings and gaps 13. Revision of logical framework Phase 2: Feb – May 2001 14. Review of wider literature on the experience of poverty in Ghana. Relate key findings to those from the characterisation of the poor conducted in Phase 1. 15. Field work to support lit. review, using focus groups to explore the perceptions and experience of the poor and to test the characteristics identified in Phase 1. Conduct in four villages. 16. Mosaicing and interpreting of the ADP imagery for the four study villages for use in activity 9. 17. Generate sample for further study using results from poverty analysis to select from those households interviewed in previous household study (R6799). 18. Semi-structured interviews with individuals and households focusing on obtaining an understanding of decision-making processes. 19. Institutional analysis. 20. Ghana workshop.	Budget: UK staff: Overseas personnel Overheads Overseas T & S Miscellaneous TOTAL Milestones: Mid-December 2000 End-December 2000 January 2001 End January Mid-February Beginning of March April Mid-May End-May	Assessment made of existing data; findings and gaps analysed. Detailed work plan set out for Phase 2 (to be confirmed during January visit to Kumasi). Visit to Kumasi; initiation of research activities for Phase 2. Revised RD1 submitted. Completion of mosaicing and interpretation of relevant ADP imagery. Literature review completed. Sampling frame and approach agreed. Field work begins. Institutional analysis initiated. Workshop in Ghana. FTR submitted	Ghanaian PUI specialists able to come to UK. .
			Pre-condition