ANNEX G

PHASE 1

Better Understanding Of Livelihoods Of The Poor In The Peri-Urban Interface

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R6448 Peri-urban Baseline Studies, Kumasi, Ghana
Baseline information collected on natural resources, associated institutional and legal frameworks, stakeholders, livelihood systems and trends in peri-urban context. Provided a research agenda for R6799 and a research project on watershed management.

Main reports:
Holland, M. D., R. K. Kasanga, C. P. Lewcock and H. J. Warburton (1996*) Peri-Urban Baseline Studies, Kumasi, Ashanti Region, Ghana, Volume 1: Executive Summary and Main Report,* Natural Resources Institute, Chatham.

Holland, M. D., R. K. Kasanga, C. P. Lewcock and H. J. Warburton (1996) *Peri-Urban Baseline Studies, Kumasi, Ashanti Region, Ghana, Volume 2: Appendices,* Natural Resources Institute, Chatham.

R6799 Kumasi Natural Resource Management Project
Concerned with increasing the productivity of the natural resource base in the peri-urban interface, particularly agriculture, livestock, mining, energy, land, water and waste, and with improving livelihood strategies.

Main reports:
Adam, M. G. et al (2000) Kumasi Natural Resources Management, Final Technical Report, Natural Resources Institute, University of Greenwich.

Natural Resources Institute (NRI) and University of Science and Technology (UST) (1997) *Kumasi Natural Resource Management Research Project, Inception Report*, NRI, Chatham.

Natural Resources Institute (NRI) and University of Science and Technology (UST) (1997) *Kumasi Natural Resource Management Research Project, Inception Report*, NRI, Chatham.

R7549 Consolidation of existing knowledge in the peri-urban interface system
Brought together the main findings to date from research in Kumasi and in Hubli-Dharwad, India, and identified gaps in knowledge in response to the revised focus of the NRSP on poverty reduction and livelihood strategies.

Main report:
R. Brook et al. (2000), *Consolidation of existing knowledge in the peri-urban interface system, Final Technical Report*, School of Agricultural and Forest Sciences, University of Wales.

Output 2.1 Characterisation of the poor and the poorest

One of the areas highlighted as a gap in knowledge related to the identification and characterisation of 'the poor' across peri-urban Kumasi. This section reports on the research carried out to address this.

1. Purpose, aims and method

The purpose of this aspect of the project is to address the issues raised regarding the identification and characterisation of 'the poor' across peri-urban Kumasi through a two-phased approach. Firstly, to reinvestigate the survey data and reports written under the Kumasi Natural Resource Management Project (KNRMP) (R6799) (see NRI and UST, 1997a and 1997b and Adam, 2000)[1] to clarify whether or not it is possible to get a fuller picture of the poor across peri-urban Kumasi. Secondly, to fill any important remaining gaps in knowledge identified during the first phase through further empirical survey work.

The first phase of the work 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 which highlights demographic and social service access characteristics. If this is feasible, the cross-referenced data should enable the construction of a detailed picture of the poor/est, including; demographic characteristics, access to housing and services, tenancy/ rents, education/ training, farmland and employment.

2. Identification of the poor and the poorest.

A number of studies carried out under the auspices of the Kumasi Natural Resources Management Project (R6799) have investigated the nature of poverty amongst peri-urban inhabitants, notably; who are the poor - how they are characterised and what proportion of the villages they represent; the factors causing poverty, and how some have been able to improve their standard of living.

Table 1. Studies and Reports of the KNRM Project that discuss poverty and the poor

No.[2]	Survey/ Report	Date	Scope	Methodology

[1] Natural Resources Institute (NRI) and University of Science and Technology (UST) (1997a) *Kumasi Natural Resource Management Research Project, Inception Report: Volume 1*, NRI, Chatham; Natural Resources Institute (NRI) and University of Science and Technology (UST) (1997b) *Kumasi Natural Resource Management Research Project, Inception Report: Volume 2, Appendices*, NRI, Chatham; Adam, M. G. et al (2000) Kumasi Natural Resources Management, Final Technical Report, Natural Resources Institute, University of Greenwich.

[2] NB. This coding system is unique to this paper (as the coding system used in Appendix 6 (Livelihoods around Kumasi) of the consolidation report is unclear.

R6799a.	Family case studies in peri-urban villages around Kumasi	1998/ 1999	Four families from different wealth categories in the 4 villages*	In-depth semi-structured interviews with family members
R6799b.	A study of wealth ranking and perceptions of wealth in peri-urban villages around Kumasi	1998	All households in four villages*	Wealth ranking methodology. Key informants ranked each household
R6799c.	Wealth ranking studies of villages in peri-urban areas of Kumasi, Ghana	1999	All households in one village*	Combination of wealth ranking & household survey data
R6799d.	Homelessness in peri-urban Kumasi study	1999	Homeless people in the 4 villages*	Interviews with homeless people
R6799e.	Kumasi natural resources management project - proceedings of final workshop	2000	All of the above	Drawing on the above & the use of sustainable livelihoods framework
R6799f.	Kumasi NRM project - final technical report	2000	All of the above	Drawing on the above
R6799g.	KNRM Project, Dealing with poverty issues in the peri-urban districts within Kumasi city region	2000	Review of poverty, it's characteristics, and government interventions	Literature review based on external (to the project) sources

* indicates the same villages covered.

The wealth-ranking exercise (R6799b) carried out in four villages[3] in peri-urban Kumasi has been the primary source of information on 'poverty' and 'the poor'. Key informants in each village defined their criteria for classification and then categorised each household. The subjective nature of the categorisation has proven to be both useful in terms of gaining the local perspective, but has also made accumulation and comparison difficult - both within and between the four villages. Nevertheless, the use of consistency measures (R6799c) demonstrated a high level of correspondence between the informants- and it can be assumed that the rankings of each informant are consistent[4].

How are the poor defined?

Each of the key informants engaged in wealth ranking, identified between four and six categories, with the bottom two strata defined as 'the poor' and 'the very poor'. Whilst these are subjective categories, and arguably those falling into other strata could be considered 'poor'[5], the targeting of the characterisation on these two lowest strata may be justified when compared with external sources of data on poverty and the poor.

The Ghana Living Standards Survey (GLSS) defined poverty using an economic index, characterising the poor as those subsisting on a per capita income of less than two-thirds of the national average. The 'hard core' poverty line is defined as income below one-third of

[3] Appendix 5. details the criteria and methodology used for selection of these four villages.
[4] Kendall's coefficient of concordance was utilised on the informants' ranking in all four villages - giving a measure of consistency between the rankings (0 = no association, 1 = exact correspondence). All of the villages fell between 0.77 (Duase) and 0.85 (Swedru).
[5] The extent to which the focus of existing and future work focuses on the poorer and poorest peri-urban individuals, households and villages rather than a broader group is an issue that needs further discussion.

the mean (R6799g, p.14). An analysis of the Ghana LSS[6] found that half of rural households in Ghana (during the 1998-99 period) are 'poor'[7]. Whilst rural poverty has fallen since 1991/92, the proportion of 'poor' and 'hard core poor' households in Ashanti region as a whole have remained almost unchanged, making up approximately 62 per cent (38 and 24 per cent respectively) of the population.

If these figures are compared to the data collected through the wealth ranking exercises in four villages of peri-urban Kumasi, the findings are similar; with the mean percentage of those characterised as 'poor' and 'very poor' across the villages 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'.

Characteristics of 'the poor/est'

Recent work on poverty based on more participatory approaches, has recognised its multi-dimensional nature (Desallien 1998:Narayan 1999[8]). In addition to income levels and access to tangible assets and services, non-economic criteria such as vulnerability, powerlessness and social exclusion are often included.

A review of the wealth ranking data, summarised in Table 2[9] 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. Whilst definitions and characteristics varied both within the studies according to interviewee and location, and between studies, there was a substantial level of consistency regarding certain 'first level' characteristics.

[6] Presented in the report "Poverty Trends in Ghana in the 1990s" Ghana Statistical Service, 1999 - Paper prepared for the 10th Consultative Group Meeting. Accra: Ghana, cited in the KNRM Project Proceedings of Final Workshop (R6799e in Table 1), pp.31-32

[7] Whilst no data focused on the peri-urban zone, it was suggested that the rural situation provided a better 'fit' with the peri-urban poverty status (R6799e, p. 31)

[8] Desallien, R.L. 1998, Review of Poverty Concepts and Indicators, Poverty Elimination Programme UNDP. Narayan, D. 1999, Can anyone hear us? Voices from Forty Seven Countries, Poverty Group World Bank.

[9] See Appendix 1 for greater detail on the characteristics identified by data source.

Table 2. 'First level' characteristics of the poor/est as identified in the KNRM Project

Occupations
▪ Hawkers
▪ Petty traders
▪ Cooked food sellers
▪ Unemployed[10]
▪ Casual labourers
▪ Food crop farmers[11]
Key asset constraints
▪ Lack of human capital - aged, infirm or disabled, poor education
▪ Lack of physical capital - homeless, unemployed
▪ Lack of natural capital - loss of land
▪ Lack of social capital - no links with village institutions or groups, poor access to resources.

Besides these, a number of other characteristics were identified across the four villages, but may be considered 'second level' characteristics as they were either highlighted by only one data source, or were present in only some of the villages.

Table 3. 'Second-level' characteristics of the poor/est as identified in the KNRM Project

Occupations
▪ Unskilled construction workers (urban and peri-urban only[12])
▪ Cobblers (urban and peri-urban only)
Socio-economic status
▪ Homeless and high density households
▪ Single parents/ those with little family support

Whilst the poor/est have been characterised through individual or household indicators via the wealth-ranking survey, family case studies and homelessness study, poverty in Ghana is perceived to be a composite of personal and village indicators (R6799g, p.10)[13]. The village characterisation survey (VCS) carried out under the KNRM Project in 1997 investigated an array of attributes including institutions, facilities, demography and employment- but has not been used to specifically identify village-level indicators of poverty. However, inferences

[10] Appendix 3 provides greater detail on the issue of unemployment, which project surveys addressed it and how.
[11] Appendix 4 provides greater detail on the determining factors of poverty for food crop farmers, responding to the issue raised in the consolidation report (R7549, p.18)
[12] NB. The Kumasi peri-urban interface was stratified into urban, peri-urban and rural zones during the initial phase of the KNRM Project.
[13] Whilst the specific focus of this research is the characterisation of the poor/est at the individual and household level, village-level indicators of poverty are also considered to be important in terms of their bearing on the individual and household.

made in broader research initiatives[14] suggest that village-level indicators include the following:

Table 4. Village-level characteristics of poverty as identified by other research programmes

Village services/ Infrastructure
▪ Lack of access to health care ▪ Lack of access to education ▪ Lack of potable water supply ▪ Lack of good sanitation

Identifying 'the poor/est' across peri-urban Kumasi

A further series of KNRM Project studies have investigated a broader array of household and village-level characteristics, which although not specifically focusing upon the poor/est members, may provide further insight into the breadth of poverty in the peri-urban area. These studies/ reports are as follows;

Table 5. Studies and Reports of the KNRM Project that discuss broader household and village level characteristics

No.	Survey/ Report	Date	Scope	Methodology
R6799h.	Village rural appraisals	1997	6 selected villages	Participatory Rural Appraisal
R6799i.	Household survey	1997	All households in 4 villages*	Structured questionnaire
R6799j.	Village characterisation survey	1997	66 randomly selected villages within 40km of Kumasi	Village-level questionnaire with key informants
R6799k.	Village-based groups study	1999	Village-based in the 4 villages*	Interviews with group members

* indicates the same villages covered.

Of these, the village characterisation survey (VCS) provides the broadest picture of livelihoods, having taken a stratified random sample of 66 peri-urban villages[15], followed by a cluster analysis that enabled villages within similar characteristics to be divided into 'urban', 'peri-urban' and 'rural'[16]. This contrasts to the detailed qualitative data obtained through the wealth ranking, family case and homelessness studies, which focused only upon four villages.

[14] Includes R6799g, p.10, Asenso-Okyere et al, 1983, "Characterising the Poor in Ghana: a logit approach" cited in R6799g, pp 10-11 and the National Development Planning Commission, 1996, "Policy Focus for Poverty Reduction" Report, cited in R6799g, p.11

[15] The stratification process is explained further in Appendix 9.

[16] The 'cluster' analysis was performed in three stages: (1) a list of variables which were felt most useful for differentiating between urban, peri-urban and rural were selected (these can be found in Volume 2. of the KNRM Project Inception Report, October 1997). (2) These variables were used in a 'cluster' analysis to try to form groupings of the villages. Villages within the same cluster are relatively homogeneous, while villages that are not in the same cluster are considerably different. Each variable selected was given equal weight in the analysis, and villages were grouped on the basis of their mean 'similarity' averaged across all the variables. (3) The cluster analysis suggested that grouping villages into either six or three groups was sensible. In order to understand the transition from urban to peri-urban to rural, it was felt best to use the three-group result, with the central group representing the 'peri-urbanness'. The number of villages in each of the three clusters was 11, 37 and 18 for urban, peri-urban and rural clusters respectively.

The following analysis attempts to establish a link[17] between the characteristics identified in the qualitative studies and the broader VCS, with the aim being to test whether or not the findings of the former can be generalised across peri-urban Kumasi.

Occupations of the poor/est

The findings of the qualitative surveys regarding the occupations of the poor/est suggested that non-farm activities play an important part in their livelihood strategies, with the likes of hawking, petty trading, the sale of cooked food, construction and cobbling all featuring. (Non-farm activities and major and minor occupations, are discussed in more detail in the annex on livelihoods below, based on the household surveys and family case studies).

An analysis of the number of villages within the VCS in which people were predominately[18] not engaged in farming (implying engagement in non- or off-farm activities or non-employment) revealed a huge disparity between the urban villages[19] in which people are predominately not-engaged in farming, and the rural villages where few are not farming (see Table 6) [20].

Table 6. Occupational statistics from the VCS

Percentage of villages in which half or more people are not engaged in farming

Occupation	**Source: VCS (R6799j.)**		
Sex/ Age[21]	**Rural**	**Peri-urban**	**Urban**
Men - old	0%	13%	91%
Men - young	6%	34%	91%
Men - mean average	***3%***	***23%***	***91%***
Women - old	0%	3%	91%
Women - young	0%	3%	100%
Women - mean aver.	***0%***	***3%***	***96%***
Overall mean average	***1.5%***	***13%***	***94%***

The implications of these findings are better investigated through an analysis of the types of non-farm occupations highlighted by the VCS with reference to the occupations of the poor/est found in the qualitative surveys.

Trading

Petty trading and hawking were identified as key occupations of the poorest in the qualitative surveys. In the VCS, the trading category included both hawking and petty trading, but also larger scale traders. Thus, whilst the former two are occupations of the poor/est, many larger traders would certainly not be amongst the poor/est village members.

Within the VCS survey, as Table 7 illustrates, trading was identified as a particularly important non-farm occupation amongst the women, highlighted in almost all villages. For men, it was less important (one in two villages), but with both equally distributed from rural to urban.

[17] It is fully recognised that the links drawn are inferences, and will not necessarily stand-up to statistical scrutiny.
[18] 50 per cent or over
[19] NB. The Kumasi peri-urban interface was stratified into urban, peri-urban and rural zones during the initial phase of the KNRM Project.
[20] Appendix 2. Presents tables for the percentage of villages in which half or more people are engaged in farming, or a mixture of farming and other activities. These data backstop table 6. In terms of the proportion of men and women (young and old) engaged in varying occupations.
[21] The age distinction was defined as those <=35 years as young, those >35 years as old.

Table 7. Trading

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.) (% of villages)**			
▪ Hawking ▪ Trading	**Sex**	**Rural**	**Peri-urban**	**Urban**
	Men	44%	39%	50%
	Women	92%	95%	100%
	Mean Average	***68%***	***67%***	***75%***

Whilst these data do not locate the intra-village poor/est, if it is accepted that certain forms of trading are typically an occupation of the poor/est, then by implication, the notable level of trading suggests that the poor are dispersed across the peri-urban interface (PUI).

Non-farm labouring

Unskilled construction work

Unskilled construction work was emphasised as an occupation of the poor/est men working in peri-urban and urban zones of the PUI, and was to some extent confirmed by the VCS data, revealing between eight per cent (peri-urban) and forty five per cent (urban) of villages contained young men engaged in construction[22].

Table 8. Unskilled construction work

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.) (% of villages)**			
▪ Unskilled construction workers	**Sex**	**Rural**	**Peri-urban**	**Urban**
	Men (young only)	N/A	8%	45%

Sand and stone winning

Other forms of non-farm labouring have also been highlighted as occupations of the poor/est[23], highlighted by the VCS in the form of sand and stone winning. As Table 9 illustrates, it is an occupation carried out only by young men, and again is more prevalent within the urban villages. Its importance as an occupation of the poor/est young urban men appears to be less than in construction, although it is more equally spread across the PUI.

Table 9. Sand stone winning

Source: Discussion with survey researchers	**Source: VCS (R6799j.)**			
▪ Other non-farm labouring	**Sex**	**Rural**	**Peri-urban**	**Urban**
	Men (young only)	11%	12%	27%

Farm labouring

Casual labour was a further key source of employment amongst the peri-urban poor/est identified in the qualitative studies. Whilst the VCS did not focus on the number of casual labourers within each of the 66 villages, a series of questions were asked regarding the source of farm labour which gives an indication of its prevalence.

[22] It is important to note that women are also engaged in unskilled non-farm labouring - particularly head loading - although many may define it simply as a source of income rather than an 'occupation' per se.

[23] Through discussion with researchers involved in several of the field studies.

Table 10 highlights the importance of the local market as the key source for labour within the majority of villages, with migrants from the north providing the second most important source, considerably more important than neighbouring villages.

Table 10. Source of farm labour

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**				
▪ Casual labourers (farm)	**Source**	**Rural**	**Peri-urban**	**Urban**	***Mean Average***
	Local villagers	100%	97%	73%	***90%***
	Neighbouring villagers	0%	13%	18%	***10%***
	Migrants from north	67%	76%	27%	***57%***

This emphasises the importance not only of local labour (potentially casual - due to the seasonal nature of agriculture), a key occupation of the poor/est, but also the role of migrant labour, particularly in the rural and peri-urban areas.

Production and sale of alcohol

The production and sale of alcohol (palm wine and spirits) and tailoring/ dressmaking are, likewise, occupations not highlighted by the qualitative surveys. However, they appear in the household survey and have been identified as income-generating activities in which the poor/est engage, although it is important to note that not all those that engage in these activities are poor.

The production and sale of alcohol, a predominately male occupation[24], appears (Table 11) more prominent amongst the rural and peri-urban villages, with one in four identifying it as an important source of income, as opposed to only one in twenty of urban villages.

Table 11. Production and sale of alcohol

Source: Discussion with survey researchers	**Source: VCS (R6799j.)**			
▪ Production and sale of palm wine and the distillation of spirits	**Sex**	**Rural**	**Peri-urban**	**Urban**
	Men	25%	22%	5%

Tailoring/ dressmaking

Tailoring is practised by men and women, although as the data shows (Table 12), is predominately a (young) female occupation with almost all villages highlighting it as an important source of income for this demographic group. Few villages highlighted it as an important occupation for men, although it is more evident amongst the urban villages.

Table 12. Tailoring/ dressmaking

Source: Discussion with survey researchers	**Source: VCS (R6799j.)**			
▪ Tailoring/ dressmaking	**Sex**	**Rural**	**Peri-urban**	**Urban**
	Men	6%	4%	23%
	Female *(young)*	47% *(94%)*	47% *(95%)*	55% *(100%)*
	Mean Average	***27%***	***26%***	***39%***

[24] Women also engage in the distillation of spirits, but palm wine production is predominately a male activity.

Conclusions

The qualitative surveys (R6799a-d) 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[25] – practised predominately by women, construction and manual labouring practised predominately amongst the men in the urban zones of the PUI.

In addition, the production and sale of alcohol and tailoring/ dressmaking were identified as further activities in which the poor/est engage[26], 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, also key occupations of the poor/est individuals and households.

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.

2. Asset constraints of the poor/est

The village characterisation survey (VCS) provides a certain amount of information on access to facilities and services, land use and ownership which can be linked to the asset constraints of the poor/est identified in the qualitative studies (R6799a-d).

Physical capital

Access to electricity, as an indicator of development, is hugely variable in peri-urban Kumasi, ranging from only six per cent of villages in the rural zone to one hundred per cent of the urban villages (Table 13.).

Within the rural zone, there are no villages in which fifty per cent or over of households have access to electricity, as opposed to one hundred per cent of the urban villages.

Table 13. Access to electricity

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**			
▪ Lack of access to physical capital		**Rural**	**Peri-urban**	**Urban**
	Percentage of villages with electricity*	6%	57%	100%
	Percentage of villages where half or more households have electricity	0%	42%	100%

Access to other facilities, as Table 14 illustrates, are variable across the peri-urban interface. Whilst daily markets are occurring in between one in four and one in two villages, the highest

[25] Although recognising that the VCS category of 'trading' may also include medium and large-scale traders that would not fall into the 'poor' or 'very poor' wealth ranking categories.

[26] Again, recognising that these occupations are not the sole domain of the poor/est, but can also be carried out by richer individuals who may have also been captured during by the VCS questionnaire.

proportion are in the peri-urban zone, implying that perhaps 'urban' villages are relying upon markets in the urban centre of Kumasi. Weekly markets are far less common, with only one in twenty holding them in the rural and peri-urban villages. Access to communications; telephones and post-offices are poor within the rural and peri-urban zones.

Table 14. Access to other facilities

Source: Qualitative surveys (R6799a-d) **Source: VCS (R6799j.)**			
Lack of access to physical capital	**Rural**	**Peri-urban**	**Urban**
Percentage of villages with a daily market	24%	57%	37%
Percentage of villages with a weekly market	6%	5%	0%
Percentage of villages with telephones*	0%	5%	55%
Percentage of villages with a post office	6%	14%	0%
Percentage of villages with a chop bar or restaurant	41%	84%	100%
Percentage of villages with commercial cement block making	0%	12%	56%
Percentage of villages with a corn mill	33%	71%	73%
Percentage of villages with a gari processing machine	0%	12%	0%
Percentage of villages with an oil palm extraction machine	0%	5%	9%
Percentage of villages with other factories	0%	8%	55%
Percentage of villages with other large commercial enterprises	17%	13%	9%

* The percentage of villages with access to electricity and telephones is likely to have increased rapidly since 1998

Similarly, the number of villages that have commercial and agro-processing enterprises are considerably higher, the more urban the village. Few rural villages have any medium or large scale enterprises, although it is interesting to note that thirty three per cent have corn mills. In addition, there are more 'large commercial enterprises'[27] in rural than urban zones, which may reflect either the desire for enterprises to locate in areas with potentially, lower land prices, or the location of urban enterprises near to (but not within) urban villages. The relatively scarcity of enterprises, particularly in the rural zones, is an indication of few strong alternative livelihood opportunities outside agriculture, and thus, potentially, a higher degree of poverty.

Natural capital

Changes in land use also give an indication of the wealth/ well-being of peri-urban inhabitants, and data from the VCS on the changes in residential, farm, forest, factory and sand winning sites clearly demonstrates the urbanisation process that has occurred since 1983 (see Table 15).

Whilst residential (particularly urban) and construction growth (rural and peri-urban) has been significant, as evidenced by the increase in the residential area and the number of villages that have initiated sand winning, the decrease in farm (rural and peri-urban), and to a lesser extent, forest areas has negative implications for the poor/est who rely upon farming and the collection and sale of forest products as key livelihood strategies.

Table 15. Land use change

Source: Qualitative	**Source: VCS (R6799j.)**

[27] It is interesting to note that all the rural commercial enterprises and the one urban commercial enterprise were poultry farm businesses, whilst the peri-urban enterprises were more diverse, including crate-making and a plant pool.

surveys (R6799a-d)

▪ Lack of access to natural capital		Rural		Peri-urban		Urban	
		1	**2**	**1**	**2**	**1**	**2**
	Residential area	<25%	+89%	<25%	+93%	>75%	+91%
	Farm area	>75%	-83%	>75%	-90%	<25%	-100%
	Forest reserves	<25%	-11%	<25%	-8%	None	n/a
	Factory/ commercial areas	<25%	+11%	<25%	+16%	~50%	+55%
	Sand winning sites	~50%	+44%	~50%	+58%	<10%	None

Key: **1.** Percentage of villages that have witnessed land use change since 1983
2. Of the percentage of villages identified in (1)
+ indicates percentage of villages that have witnessed increase since 1983
- indicates percentage of villages that have witnessed decrease since 1983

Land ownership, as illustrated in Table 16, has witnessed considerable change since 1983. Family owned land[28] has decreased substantially, particularly in the rural and peri-urban areas, and privately owned land has increased predominately in the urban zones[29].

Loss of agricultural land was identified as a key characteristic of the poor/est by the qualitative surveys in four villages, and has been confirmed by the VCS as a trait across peri-urban Kumasi. The household survey provides a comparison of the scale of land loss (amounts of land and numbers of people affected) in four villages across the rural, peri-urban and urban continuum.

Table 16. Land ownership

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j)**					
Lack of access to natural capital		Rural		Peri-urban		Urban	
		1	**2**	**1**	**2**	**1**	**2**
	Family lands	>75%	-93%	~50%	-94%	<25%	-100%

[28] 'Family lands' in Ghana are defined as where the family has usufruct rights to cultivate and farm the land. Thus in the rural and peri-urban villages, almost all lands belong to families. Individuals within families have a right to cultivate family lands for food crops and other farming activities. However, in practice, the chiefs are custodians of the lands and have the right to dispose of the land in case of physical developments like housing.

[29] As urbanisation increases across the peri-urban interface, private individuals move in to buy land from the chiefs for private housing and other physical developments. Farm lands are therefore converted into housing and physical developments and family land ownership changes to private/individual ownership. The poor farmer within the family looses the right to cultivate the land or even develop it in another way. (S)he may seek land from other families who have not lost land as a result of the generally slow nature of physical development, on such terms as share cropping and cash rental if (s)he has money, or temporary farming on the housing plots that are not developed. Some turn to other occupations, such as casual labour on farms or construction sites. Compensatory payment by the chief is not reliable, with few families receiving compensation for the loss of land. The compensation which is paid generally in the form of housing plots may go to the family head who may keep it or sell it for his private use. The poor farmer may get compensation from the developer for any crops. In most case the developer normally refuses to pay because (s)he did not get the land from the farmer. The problems of the poor farmer are therefore compounded by the loss of land and lack of compensation for crops. As family farmland has decreased as a result of sales to individuals, individual rights and private ownership have increased.

Private lands	<25%	+95%	<25%	+93%	>75%	+100%

Key:
1. Percentage of villages that have witnessed land ownership change since 1983
2. Of the percentage of villages identified in (1)
+ indicates percentage of villages that have witnessed increase since 1983
- indicates percentage of villages that have witnessed decrease since 1983

Human capital

The VCS identified the presence of social services within the 66 villages surveyed, including schools, medical facilities and water sources.

As Table 16 illustrates, the percentage of villages with kindergarten and primary schools is fairly consistent across the peri-urban interface, demonstrating a high level of junior educational establishments. At the more senior end (junior and senior secondary), the percentages are lower, with the peri-urban zone recording the highest prevalence[30].

Table 17. Access to schools

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**			
▪ Lack of access to human capital		**Rural**	**Peri-urban**	**Urban**
	Percentage of villages with kindergarten	53%	95%	82%
	Percentage of villages with primary schools	82%	92%	82%
	Percentage of villages with junior secondary schools	29%	84%	64%
	Percentage of villages with senior secondary schools	0%	16%	18%

These data give no indication of the length of time over which schools have been established, nor of the issues of accessibility to education by the poor/est, i.e. educational costs, trade-offs with child employment on-farm, etc., but are a positive indication for the well-being of village members as a whole.

The percentage of villages with medical facilities within the peri-urban interface are relatively high within the peri-urban and urban zones, but negligible within the rural zones. Traditional Birth Attendants are the most common source of medical support (present in between one in three and two in three villages), with hospitals least prevalent, with only one present in the sixty six villages sampled.

Table 18. Access to medical facilities

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**			
▪ Lack of access to human capital		**Rural**	**Peri-urban**	**Urban**
	Percentage of villages with a nurse/ health worker	0%	38%	37%

[30] The relatively low recorded number of educational establishments in the urban zones may be due to proximity to the urban centre of Kumasi, with potentially greater access to these facilities, or due to the relatively small sample size of urban villages (11, as opposed to 18 rural and 38 peri-urban).

Percentage of villages with a trained midwife	0%	33%	45%
Percentage of villages with a traditional birth attendant	59%	73%	36%
Percentage of villages with a clinic/ health centre	0%	32%	18%
Percentage of villages with a hospital	0%	3%	0%
Percentage of villages with a pharmacy	12%	70%	100%

The lack of easy access to health care, particularly in the rural zone, confirms the findings of the qualitative surveys, in which poor health (whether related to infirmity, old age or disability) was identified as a key characteristic of the poor/est.

The pattern of access to water for drinking, a further indicator of human capital as a proxy for health status and well-being, is illustrated below in Table 19. Villages located in the rural zone appear to rely upon water from streams, rivers or lakes and upon bore holes, whereas piped water was available in most villages in urban zones, and to all those within these villages.

Table 19. Access to drinking water

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**			
▪ Lack of access to human capital		**Rural**	**Peri-urban**	**Urban**
	Percentage of villages in which almost all villagers access piped water from Kumasi	11%	32%	100%
	Percentage of villages in which almost all villagers access water from a bore hole	44%	43%	9%
	Percentage of villages in which almost all villagers access water from a well	17%	42%	27%
	Percentage of villages in which almost all villagers access water from a stream, river or lake.	61%	47%	36%

The poor quality of water generally available through streams, rivers and lakes suggests that access to potable water is a constraint for the rural dwellers. This gives no indication of the extent of poverty, or the location of the poor/est across the peri-urban interface, but implies that those within the more rural areas are more likely to suffer the ill effects of poor water quality.

Social capital

The lack of social capital has been highlighted as a characteristic of the poor/est, with poor familial, communal or commercial links considered to be both the cause and effect of poverty. The VCS, by recording the level of association within each village, can be used to assess social capital in Putnam's sense of the concept[31].

[31] Putnam's, 1993, study of Italy argues that the higher density of voluntary associations amongst people in northern Italy explains the region's economic success relative to southern Italy, where such associations are less frequent. This study has been the foundation of extensive research and discussion on the concept of Social Capital.

Table 20. Percentage of villages with village based organisations

Source: Qualitative surveys (R6799a-d)	**Source: VCS (R6799j.)**			
▪ Lack of access to social capital		**Rural**	**Peri-urban**	**Urban**
	Unit Committee	28%	21%	9%
	Town Development Committee	67%	71%	82%
	Mobilisation and youth groups	17%	34%	27%
	Communal working groups	11%	3%	0%
	Trade & marketing associations/ coops	28%	34%	9%
	Religious organisations	100%	97%	100%
	Other NGOs	22%	29%	18%
	Political parties	11%	18%	18%
	Locally-funded projects	94%	76%	36%
	Externally funded projects	61%	71%	73%
	Mean	***44%***	***45%***	***37%***

As Table 20 shows, the highest mean level of association is located in peri-urban zones of the peri-urban interface, whilst the lowest level resides in the urban areas. This may suggest that whilst access to services are relatively high, social cohesion may be weakened in rapidly urbanising villages, through increased heterogeneity in the ethnic origin of the population, in occupations and asset status.

Whilst the VCS data gives an indication of social capital 'levels' at the village level, the family case studies (R6799a) and the village-based groups study (R6799k)[32] provides some further insight into the quality of social capital amongst the poor/est.

Despite the variation in the nature of group association, with rural groups tending to form around agricultural issues, and urban groups around welfare and development, access to these groups appears to be largely beyond the poor/est. Aside from church groups and labour arrangements, no 'poor' individuals interviewed in the family case studies were members of groups, and thus were excluded from the benefits of (constituted) group membership.

Exclusion of the poor/est may be due to origin; with those who are indigenous members of the village more likely to have established relationships (although potentially good or bad) with group members and local authorities, whilst recent migrants may not be familiar with village members and social networks. Whilst no group specifically stated that they exclude non-indigenous members, clearly these historical social ties will disbenefit newer village members.

Exclusion of the poorest may also relate to the monthly dues, levies and donations that make up the conditions for entry and maintenance within a group. Dues range from approximately 200 cedis to 2000 cedis per month, with some rural groups charged newcomers as much as 5000 cedis per month. Whilst these dues may not be prohibitive for many villagers, the poor/est are unlikely to be able to afford payment on a monthly basis, and thus are unable to join or maintain membership.

Age and ill-health may also prevent the poor/est members from maintaining group membership, with certain associations - notably those that include hard physical activity- restricting membership to those who are below a certain age (40ish) and to those of good

[32] It is noted that both of these studies were carried out in four villages only, and thus this analysis does not represent a substantial sample of peri-urban villages in the same way as the VCS.

health. Whilst older or infirm village members may not wish to engage in physical activity, the social benefits that come from group membership are missed.

Despite these potential reasons for group exclusion, some of the poor/est do benefit from groups, with many groups stating that they use funds/ profits to support needy women, parenting orphans, the old, infirm and the economically deprived with financial and in-kind support. Nevertheless, the picture remains mixed, with some of the poor interviewed during the family case studies stated that they received no support from the village, and thus they remain in the cycle of poverty.

Conclusions

The poor/est have been defined not only by their occupation, but also 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 and access to the likes of electricity, telephones, restaurants and certain forms of enterprise. 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.

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 provided an interesting contrast, which, based on Putnam's theory of density of association, 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 do benefit from the hand-outs of village members.

Output 2.2. Livelihood strategies and outcomes

1. Background and approach

The KNRMP project gathered a substantial amount of data on elements of people's livelihoods but it was only at the end of the project that a start was made on pulling together the different information sources from a sustainable livelihood's perspective. An introduction to the livelihoods approach and a summary of livelihood status in peri-urban Kumasi was covered in the 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 is particularly noted in the two most urbanised villages, with consequent insecurity of tenure, effects on investment and crop choice. Similarly details of housing types and access to water and electricity are

covered. Urbanisation is associated with a decline in the prevalence of farming as a major occupation while the number and range of other occupations increase. However, the paper does not deal with the actual dynamics of people's choices and preferences for specific livelihood strategies, nor were the distribution of land losses and compensation, access to services and occupations by gender or age explored.

The focus of livelihoods analysis under output 2.2 of the current project is on the different patterns of access and livelihood strategies of different gender and age groups in urban, peri-urban and rural villages. The main issues were:

- Access to capital assets
  - Patterns of access to, and control and decision making over assets according to gender, age and wealth status; how assets are combined and their associated livelihood outcomes.
  - Coping strategies developed by households and individuals that lost land and land use changes in general.
  - Intra and inter-household resource flows.

- Livelihood strategies and ability to diversify, both short and longer term
  - Access to employment and income-generating activities related to differences in gender, age, kinship relations, social capital. NR and non-NR based opportunities.
  - Access to start-up capital and skills for entry into sustainable employment. Importance of education/apprentice schemes in influencing access to employment and securing improved livelihoods.
  - Local perceptions of livelihood opportunities. Perspectives of younger generations on different livelihood strategies.
  - Success and/or inhibiting factors that enable or prevent people's move out of poverty.

- The role of local institutions and community based organisations in influencing poor people's access to capital assets and outcomes of their livelihood strategies with urbanisation.

Two main sources of *previously unanalysed data* were used; the family case studies (typescript of field notes) and the household survey (in an Access data base). The family case studies contain detailed interviews with all adult members of extended families, selected across different wealth categories (appendix 6). The household survey contains data on all the households in four villages, one defined as urban, two peri-urban, and one rural. Information was collected both on the 'house' (in the sense of residential unit) and on individual household members ('household' defined as people who live together and eat from the same pot and consider themselves to be an economically independent unit, R6799 Final workshop proceedings, p54.[33]).

In addition, a short summary has been written on the four case study villages, Aburaso, Apatrapa, Swedru and Duase which describes the specific context and the similarities and differences between the 4 study villages (see appendix 11). Information on the case study villages was derived from the PRA, the VCS survey and observations from the research team. The underlying rationale was to explore to what extent urbanisation processes have had an impact on people's livelihoods and how these might differ among villages according to the available opportunities and constraints.

[33] See appendix 10.

2. Family case study analysis

Methodology

The family case studies contain a high level of detail on people's access to capital assets and individual livelihood strategies, but it had not been analysed fully under the KNRMP. A particular objective of the detailed systematic analysis of family case studies, was to obtain a better understanding of the actual dynamics of people's livelihoods, their access to and ability to combine assets and the ways in which outcomes are influenced by shocks and trends, policies and institutions. These insights would then be linked to and compared with the household survey and the Village Characterisation Survey (VCS).

The family case studies explored the livelihoods of selected families based on the wealth status of family heads. For each of the 4 study villages, families were selected from the different wealth rank categories identified in an earlier phase of the KNRMP project (Table 1). All of the family members on the maternal side were interviewed. The objectives were to trace genealogies, individual interrelationships, explore livelihood patterns from a temporal perspective and to identify coping strategies used in response to urbanisation. The topics covered in semi-structured interviews were: genealogy, income generating activities, household support, farming activities, residential land and housing, education and training, other natural resources, village linkages and social interaction, movements, general welfare, changes and attitude to village and the future.

Table 1: Wealth categories of household heads interviewed in the family case study

Wealth status	Stranger (male)	Stranger (female)	Indigenous (male)	Indigenous (female)
Rich	Apatrapa	Aburaso	Duase	Swedru
Poor	Swedru	Apatrapa	Aburaso	Duase
Poorest	Duase	Swedru	Apatrapa	Aburaso
royal family				Apatrapa Aburaso (rich)

All interviews from the family case study (14 household heads and 60 individual interviews in total) have been analysed in terms of individuals' access to the 5 capital assets (natural, social, financial, human and physical capital). The interviews were grouped according to three age categories (younger than 35, between 35 and 55 and older than 55), gender and village of residence. The different categories were compared to explore differences and similarities of people's livelihood strategies and the underlying dynamics.

Individual's access to assets were valued as 'low', 'average' and 'good' based on qualitative, descriptive assessment criteria developed through discussions with the research team to incorporate local cultural values within the evaluation. These assessment criteria are outlined in the detailed discussion of all capital assets. However, we recognise that the evaluation of access to assets is rather subjective, also because the information was rather patchy, it did not allow for an in-depth all-inclusive analysis. Additional information on individual preferences, perceptions, incomes and expenditures, individual personal life histories and relationships within and between households from the same family, would probably have given a better understanding of people's actual well-being, their livelihood strategies, their preferences and the actual dynamics to which people respond. The number of respondents, representing different age groups, gender and village, is very limited and therefore the analysis can only contribute alongside other data to developing a basic understanding of trends in livelihood strategies as affected by urbanisation patterns around Kumasi.

Table 2: Number of interviews for each village

	Men	Women	Total
Aburaso	8	12	20
Apatrapa	4	4	8
Duase	10	11	21
Swedru	5	6	11
Total	**27**	**33**	**60**

Access to assets

Natural capital

Natural capital is defined as natural resources made up of air, land, soils, minerals, plant and animal life that people use. They provide goods and services, either without people's influence (e.g. forest wildlife, soil stabilisation) or with their active intervention (e.g. farm crops, tree plantations). Natural capital can be measured in terms of quantity and quality (e.g. acreage, head of cattle, diversity and fertility). It is important not only for its environmental benefits, but also because it is the essential basis of many rural economies (e.g. in providing food, building material, fodder etc.) *(SL Fact Sheet 52, NRI).*

Information on natural capital is rather limited, as it is mainly focused on access to land for farming. Access to fuel wood and NTFP is partly covered, but rather patchy. There is no information on access to water, the quality and availability.

Table 3: Access to natural capital

Natural Capital	**Young Younger than 35**		**Middle aged 35-55**		**Old above 55**		**Total**
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	
None	7	10	3	1	-	3	*24*
Low	6	4	1	1	2	1	*15*
Average	3	2	2	3	-	-	*10*
Good	1	3	1	1	1	4	*11*
	N =17	N =19	N = 7	N = 6	N = 3	N = 8	*N = 60*

Assessment criteria:

None: no access to land, fuel wood and NTFP

Low: less than 1 acre of land, either through available family land, sharecropping, cash rental or borrowed or a combination of any type of access. Access to family land is higher valued than sharecropping due to improved security and less opportunity costs.

Average: area of land in between 1<x<2½ acres, plus some access to fuel wood and/or NTFP

Good: more than 2 acres of land, combination of food and cash crops such as oil palm, cacao, citrus and/or vegetables

In general, very few respondents had access to fuel wood and even less to non-timber forest products, especially in Apatrapa, Aburaso and Duase. In Swedru, the availability was slightly better but decreasing. In the past, fuel wood and non timber forest produces were freely available, from both the communal and family land, but has become scarce and is currently only accessible from family or individually owned land and in insufficient quantities to meet household needs. Most respondents mentioned that fuel wood (often replaced by charcoal) and non-timber forest produces such as mushrooms and wild herbs are bought from the markets. Only those who had farms outside the Kumasi region, e.g. in the Western region,

had sufficient access to fuel wood and NTFPs for household consumption. None of the interviewees was involved in NTFP and fuel wood gathering and/or charcoal production as an income generating activity. It was not clear whether decreased access to fuel wood was perceived as a problem. The older respondents generally commented that fuel wood and NTFP were abundant in the past. Obviously, it is not a problem for the men, especially the young ones, as they do not cook their own meals, but obtain meals at the family house or buy cooked food from the markets.

Information on land mainly dealt with access to farm land, with additional information on size, location and type of tenure, e.g. access to family land, share cropping, temporarily borrowed or cash rental. However, the information is sometimes rather patchy and lacks detail of dynamics such as how access to land is actually mediated. Another problem encountered when assessing the information on access to land is the probability that the data overestimate the land available to individuals for farming. A household and/or family head might refer to the same land area as her daughter, given the impression that they each have 1 acre of family land for farming, whereas in reality they might only have ½ acre of family land on an individual basis.

It is also not clear what definition of farming has been used during the study, in terms of scale and geographical location. If they had access to land, the respondents tended to describe the different plots as 'farms', however, no information on location was given other than whether the farm was inside the village or outside the village boundaries, e.g. land in Western Region. The actual geographical location such as uplands, near streams, in/close or far from the built up areas of the village was not specified which might have implications for decision making related to farm management. First, security of access to land as land in the valley bottoms is less likely to be converted into housing plots due to disadvantageous properties of the land for building (too wet). Land located near the village is more prone to housing development than land further away from the main roads and village centres. Second, suitability for crops, valley bottom land is often more fertile, and suitable for vegetable production etc. whereas upland soils are often better for tuber crops such as cassava etc.

People who said that they had no access to land might still be involved in backyard farming, e.g. vegetable production on a small-scale for household consumption only. According to observations from the research team, backyard farming hardly exists in the villages due to the style and layout of compound/family houses. The traditional style of family houses is a number of small rooms built closely around a courtyard, therefore there is no space left for backyard farming other than along the outer wall, which might be a road and subsequently very prone to theft and damage. New houses, built in villa style, have more space around the house, and people living in these houses are more likely to be involved in backyard gardening. This observation is confirmed by data collected in the household survey that shows a strong correlation between villa type of housing and backyard gardening activities. However, the research team also mentioned that people often had a small piece of land along the river for cultivation of okra, garden eggs and cocoyam, mainly for household consumption. Such an area might not be perceived as a 'farm', nor mentioned in the context of questions about access to land for farming.

Access to land seems somehow very much related to marital status. The men in the case studies who had no access to land were all single, whereas 15 out of 17 men who had access to land were all married. Only two single young men had access to a small plot of ½ acres (family land). A similar picture emerges for women; all women who had access to land were married or had been married (either widowed or divorced), there was no single woman with access to land. However, unlike men, there does not seem to be an association between marital status and 'no access to land' as both married and single women had no access, although the proportion of young and single women with no land is relatively high. In

relation to marital status, it is not surprising that less than 25% of the young generation had good to average access to land, compared to about 50% of the older generation. Older women (above 35), who had established themselves in a successful business, did not seem to have any access to land. Either they have no interest in engaging in farming or they lack time and resources to take on an additional income generating activity. Reasons why women above 55 have no access to land are related to old age and physical weakness and loss of land after their husband's death.

Access to land through family land is by far the most common, followed by sharecropping, renting and borrowing. For women, access to land through marriage seems rather important as a few mentioned that they had access to their husband's family land or had been given land by their husbands in return for labour. Some respondents had a combination of different tenure types, such as family land from both sides and occasionally sharecropping. Sharecropping is mainly carried out by strangers, as they often do not belong to any local kinship relationships that entitle them to family land. Sometimes, they still have access to family land in their home village. Respondents who had lost land, either sharecropped, borrowed or rented land within the village or managed to get access to land outside the village (no information about this process of land acquisition).

The average farm size for households was largest for Swedru followed by Duase, Aburaso and Apatrapa. Overall, it is less than 1 acre (for land within the 4 case study villages). Households living outside of the 4 villages or those who owned land elsewhere usually had larger areas of land, around 5 acres or more. Most respondents with land within the village boundaries commented that soil fertility had gone down due to increased pressure on land. However, people with land elsewhere, e.g. the Western Region, stated that the yields were good and soil fertility was not perceived as a problem.

Good access to land within the village seems to be related to a high socio-political status, e.g. family member of the royal family or a respected elder and fetish holder. Others without such a good social network acquired good access to land outside the village like the Western Region with larger areas of land combining food and cash (tree) crops such as cacao, oil palm and citrus. For the younger group, the importance of kinship in securing access to land is striking, as most young men and women who have access to land belong to the royal family or a family with high socio-political status. Women also secure access to land through their husbands. Alternatively, access to land is also secured through the father's family (especially the third generation) or if married through the wife's family. Half of the respondents, who have no access to land, live outside of their home village. The question to ask is whether they have moved to find opportunities elsewhere due to lack of land and opportunities in their home village or because they moved away, they have never actively tried to get access to land. There is one example of someone living and being employed in Kumasi who bought a plot earmarked for housing development, located in his home village. It is not clear whether he sees it as an investment or whether he plans to move back to his home village at a later stage in his life. There is obviously a lack of information in personal strategies and preferences.

Of those with good access (8 out of 11, (6 women and 2 men)) had their land located outside the Kumasi region, especially in the Western region. It is interesting to note that they were all above 35 years. Provided the younger generation had an interest in farming, the question is whether land is becoming a scarce commodity in the Western Region as well, and/or do the younger generation lack the capital, resources and contacts to acquire a plot in a new area? However, observations from the research team seem to suggest that young people are far less interested in farming even if they were given the opportunity. Unfortunately there is little information available about general perceptions on farming other than that most respondents perceive food crop farmers, landless and casual labourers to be among the poorest followed by petty traders, self employed, workshop owners, store keepers, business

people and those with a salaried income. However, a few mentioned that farmers, who have larger areas of land, and are involved in vegetable, oil palm, citrus or cocoa farming were doing rather well. More information is needed on people's perception of farming, its socio-cultural value and a cost benefit analysis to assess the opportunity costs of farming in comparison to other opportunities available such as trade or skill based livelihood.

Considering the significance of access to land in terms of livelihood strategies, the data seem to suggest a gradual shift from farming as a major occupation towards a minor occupation. For the majority of those, especially the younger generation, who had access to land, farming is seen as a minor occupation in combination with other activities such as carpentry, shoe making, salaried income, dress making supplemented by trading activities. Farming is seen as an activity that supplements household income through cultivation of food crops for household consumption, especially in Duase and Apatrapa. In Swedru, those with access to land, did not have additional sources of income, and income through vegetable production was crucial. The older generation showed less diversification of income sources and were to a larger extent dependent on farming as the basis of their livelihood. For people with access to land outside the Kumasi region, farming remained the most important, if not only source of livelihood. Those with no access to land were either living and working outside their home village, or dependent on wage labour and/or support from their relatives and/or wives.

Loss of agricultural land and forests caused by rapid urbanisation and increased demand for housing development is often mentioned as one of the most serious threats to livelihoods of poor people living in the peri-urban fringe. Respondents often commented that more and more land was taken up for housing development, leading to an increased pressure on farm land available. Although, the family case studies provide some detail on loss of land such as whether families have experienced lost of land, there is little insight into the dynamics of such changes in land distribution and its impact on people's livelihood strategies. Questions such as the impact of land loss on people's livelihoods, their responses and strategies to cope with loss of land, remain unexplored. Therefore little can be said about the pull and push factors that make people move away from largely NR based livelihoods towards a hybrid of NR and non-NR based livelihood strategies. To what extent is diversification in income generating activities a consequence of changes in land use or is it more likely related to an opening up of a wider range of livelihood opportunities for those living in the peri-urban interface?

Only older respondents mentioned loss of land, 5 out of 8 indigenous family heads interviewed reported that they lost land. Two of them said that it had not really affected their and their children's livelihood, especially as the children tended to move away and to find better opportunities elsewhere. Two families said that the loss of land affected them directly, especially the older and middle aged generation. Coping strategies are borrowing land and securing access to land outside the village, e.g. in the Western region, especially for the elder generation. It is striking that a rather large number of people, especially the ones with no land at all, moved elsewhere for better opportunities, either in terms of salaried incomes, trade or farming. As raised earlier the question is whether they moved in search for better opportunities because of limited availability of land, or they moved away due to better opportunities elsewhere and consequently have no access to land as their absence inhibit possibilities to acquire access to land?

Social capital

Social capital is described as that part of human resources determined by the relationships people have with others. These relationships may be between e.g. family members, friends, workers, communities, and organisations, and can be defined by their purpose and qualities

such as trust, closeness, strength and flexibility. Social capital is important for its intrinsic value, and also because it increases well-being; facilitates the generation of other capital; and serves to generate the framework of the society in general, with its cultural, religious, political and other norms of behaviour *(see SL fact sheet 52, NRI).*

The information available relates mainly to support and contacts within the nuclear family/household. It, however, lacks any in-depth insights as it is does not provide detail about intra- and inter-household relations and resource flows, the dynamics of social relationships and how different forms of support are re-negotiated and to what extent they are based on reciprocity. Furthermore, there is no information on how people perceive the importance of social networks, their kinship relations, the value of extended families and whether these values are changing or have been changing over the past years.

Table 4 Access to social capital

Social Capital	**Young Younger than 35**		**Middle aged 35-55**		**Old above 55**		**Total**
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	
Low	1	1	-	-	-	-	*2*
Average	4	1	2	1	-	1	*9*
Good	12	17	5	5	3	7	*49*
	N =17	N =19	N = 7	N = 6	N = 3	N = 8	*N = 60*

Assessment criteria:

Low: very little support or no support from close relatives, or sources of social capital unstable, e.g. through friends or professionally (e.g. contacts at the construction sites mediated through occasional wage labour. Limited access means that is insufficient for survival and subsequently the person is struggling for his/her upkeep.

Average: sufficient for survival and meeting all basic needs, but range of opportunities for support are rather limited and the person is highly depended on one particular person, e.g. mother providing meals, accommodation and other necessities.

Good: a wider range of support, for instance a married woman gets support from her husband in terms of food and money for their household, parents can provide for accommodation, land, money for wage labour and/or training etc. Older people might depend on their children for financial support, food etc.

Although data on membership of community groups, such as church-based singing groups and welfare based women groups etc. have been gathered, they do not reveal to what extent such membership improves people's wellbeing. How and to what extent do people benefit from its membership, what are their motivations and expectations of becoming a member and how do these groups link in with wider community and other groups? Therefore, the analysis of social capital is mainly based on respondents' relationships with close relatives and friends that have an impact on the outcomes of their livelihood strategies. Their network with the wider community has not been taken into account unless there was a clear association with their livelihood strategies, e.g. member of royal family having better access to land.

Analysis of the data shows the great importance of a social network, almost entirely based on close kinship relations and in few cases friends, especially for strangers who do not have access to a local network based on kinship relations. The majority of respondents could rely on a good social network through close relations with one or both of their parents, sisters, brothers and wife/husband/boyfriend. Support can vary from accommodation, food, money for general upkeep, support from husbands for children, provide resources for training and occasionally starting capital for a business, shop or trade. The most important support

relationships are parents-children and marriage. Other important forms of social capital are better off brothers and sisters, friends and contacts established through income generating activities, such as customers, traders for receiving goods on credits, good relationships with employers and a professional status e.g. teacher. Less common forms of social capital are; membership of community based groups, church based singing groups, participation in communal labour, political parties, trading associations, youth groups and political affiliations.

For married women, the most important source of support is the husband, but if insufficient, they rely on support from the wider family network, e.g. parents and sisters (brothers have not been mentioned at all). Marriage can improve access to land, e.g. through husband's family land. Maintaining close relationships to relatives living in the family house seems to be important as several married women mentioned that they spent most of their daytime at their parental family house only to return to their husband's place in the evenings. Single women mainly rely on their parents and sisters for mutual support. For younger women, support from their mothers seems to be very important, in terms of food, accommodation and general upkeep. In general, single young women with small children are very vulnerable, as they have to look after their children as well. Older women often mention their daughters' support in form of labour, e.g. providing labour on their farm. Also for men, marriage seems to improve their social capital as they all mention their wife's support in looking after the household, providing additional income through trading and/or labour on the farm. As discussed earlier under the heading of natural capital, there is a strong correlation between marital status and access to land. However, one might wonder whether improved access to social capital might also increase one's obligations towards other family members, in-laws and friends?

Kinship relations can improve access to natural capital such as land. As discussed earlier, being a member of the royal family can be beneficial in terms of access to land. The case studies contained a few examples of children, belonging to a royal family or of a respected elder that had better access to land compared to others without these social political connections. Improved access to natural capital might be the most obvious one, but such kinship relations may also help in accessing financial capital, for example, obtaining goods on credit for trading, starting capital for a business or help in securing an apprenticeship etc.

Age does not seem to influence people's ability to access social capital, as both young and older respondents had predominantly good access to social capital, but the nature of such social relationships might vary. Parents often support their 'younger children' with basic needs such as accommodation (often a room in the family house) and meals, and provide opportunities for training. In few cases, training was paid for by better-off brothers and sisters. Occasionally, parents also provide starting capital for a trade or business such as a carpentry or shoemaking workshop. Young single men often mentioned support through meals at the family house and as mentioned earlier, married women living nearby frequent the family home on an almost daily basis. Older respondents stated that children living nearby are their most important source of support when they are not able to look after themselves anymore, e.g. through labour on family farm land, accommodation, provision of meals and financial support. Sometimes children living abroad provided support through remittances but that was not always the case.

Friends and professional contacts are an important additional source of support to get into a trading business (getting goods on credits) and/or obtain a starting capital/tools for a workshop such as shoemaking or hairdressing. Especially for strangers, such informal social networks are of crucial importance, as they can not rely on local support from their kin. One young woman, a stranger, had a rather negative perception of the community she lived in, and found it difficult to survive after her mother had moved back to the rural areas. This raises the question of spatial boundaries of social capital, is it mainly confined to local village

boundaries or does it go beyond? Case studies seem to imply that most support is received from local relatives, as the few examples of strangers and younger generations, living away from their parents/siblings, seemed to rely more on friends and other contacts. However, interviews contained little information about mutual visits and intra-household flows, therefore it is not possible to draw any conclusions as these relationships may be far more complex than presented.

Physical capital

Physical capital is derived from the resources created by people, such as buildings, roads, transport, drinking water, electricity, communication systems etc., as well as equipment and machinery for producing further capital. It thus comprises producer goods and services, and also consumer goods available for people to use. Physical capital is important not only for meeting people's needs directly, but also for providing access to other capital (e.g. via transport and infrastructure) *(SL Fact sheets 52, NRI)*.

Table 5 Access to physical capital

Physical Capital	**Young Younger than 35**		**Middle aged 35-55**		**Old above 55**		**Total**
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	
Low	10	12	4	2	1	4	*33*
Average	3	1	2	1	-	2	*9*
Good	4	6	1	3	2	2	*18*
	N =17	N =19	N = 7	N = 6	N = 3	N = 8	*N = 60*

Assessment criteria

Low: sharing a room in one family house, either with husband/wife and children or with other relatives, often in crowded conditions. No information is available on actual condition of house, sanitation and piped water conditions.

Average: having access to rooms in both family houses, or own room in family house

Good: own house, or renting several rooms and access to or ownership of a store/shop, market stall and/or a workshop including tools (e.g. for shoe making and carpentry). electrical equipment (fridge), transport (car, bike, motorbike), Own house might not necessarily be positive, might accommodate many others?

Information on physical assets from the family case studies is very limited as it is mainly confined to respondents' housing conditions and to a limited extent access to tools, workshops etc. There is no information about individual's ownership of electrical appliances (e.g. fridge), modes of transport (such as bike, motorbike or car) nor on individual's access to electricity, sources of water, school, and health services and individual's perception of adequacy of such services. A possible link could be established with VCS and household survey data on households' access to such services but might give again a rather generic picture than specifically individuals' access to several assets and their actual well being.

With regard to housing, the majority of all respondents did not have their own place but lived in shared rooms in a family house, sometimes in rather crowded conditions. Married couples tend to have their own rooms, sharing with their children and possibly other dependants. Single men were often sharing with other relatives or friends whereas young women often shared a room with their mother, children and grandchildren. Young people, especially, lived in shared conditions whereas older people seem to be slightly better established and a few of them had their own house. However, since they might share this house with many others, their living conditions were not necessarily better compared to others. Strangers or people who had moved away from their home village were either staying in their husband's family house (if married) or renting accommodation. There seems

to be no obvious differences between women and men in terms of access to housing. In terms of access to physical assets, young people tend to invest more in development of non-NR based strategies and therefore are more likely to invest in infrastructure needed for a micro enterprise such as a carpentry or a shoemaking workshop or a hairdressing salon including tools and equipment. Those who had access to those assets were valued as having good access to physical capital whereas good physical capital for older respondents generally meant having property.

Human capital

Human capital is that part of human resources determined by people's qualities, e.g. personalities, attitudes, aptitudes, skills, knowledge, and physical, mental and spiritual health. Human capital is the most important, not only for its intrinsic value, but also because other capital assets cannot be used without it. It can be difficult to define and measure, like social capital (SL Fact sheet 52, NRI).

Table 6 Access to Human capital

Human Capital	**Young Younger than 35**		**Middle aged 35-55**		**Old above 55**		**Total**
	Men	*Women*	*Men*	*Women*	*Men*	*Women*	
Low	-	3	1	3	1	6	*14*
Average	8	9	1	2	2	-	*22*
Good	9	7	5	1	-	2	*24*
	N =17	N =19	N = 7	N = 6	N = 3	N = 8	*N = 60*

Assessment criteria

Low: no formal education, no training or specific skills and physical characteristics such as old age and physical weaknesses

Average: completed middle school/JSS or primary school in combination with skill straining such as hairdressing, dress making, shoe making. Additional criteria; being looked after/fed properly

Good: Middle school/JSS plus skill training (or combination of several skills). Trading skills are also taken into account if successful business.

In our analysis, human capital mainly relates to levels of education and additional skills training and skills developed by practice (for example trading). Also physical well being such as age, physical strength and being looked after well (e.g. through provisions of meals by parents and/or children). The family case studies did not give much detail about individual's access to facilities such as schools, medical facilities and clean water. Statements about such services applied generally to the whole village as such, which might of course differ on a household and even individual level. In addition, quite a few individuals interviewed were not resident of one of the 4 case study villages.

The data indicate that education and skill training are highly valued by all respondents, both the younger and older generation. As expected, the younger generation has generally higher levels of formal education, almost all of the younger generation had completed a certain level of middle school or junior secondary school education, whereas among the older respondents, especially women, achieved formal education levels were much lower. Furthermore, the number of young respondents having gone through additional training or apprenticeships is far higher, almost all men and most of the young men. The choice of training and apprenticeships is strongly associated with gender. Men's choices are more diverse among men, whereas among women they are limited to hairdressing and dressmaking. In addition, the proportion of men engaged in formal employment/education is higher than for women. There was only one example of a woman who is a retired teacher,

whereas other women, who were doing rather well, had acquired their skills and well being through the informal sector of trading. Support for training is mainly provided by the parents or well-of sisters and brothers. Occasionally, friends or professional contacts would help in accessing an apprenticeship or setting up a business.

It turned out to be rather difficult to value people's training and education as quite a few dropped out of training for various reasons. In addition, some respondents had done several forms of training, but were not utilising it currently for various, but not always obvious reasons. In particular, very few young women actually completed their training and managed to set up a business like a hairdressing saloon. Inhibiting factors, the rule rather than the exception, for successful completion and follow-up, are pregnancy (the most frequent one), lack of funds for paying training fees and lack of a starting capital for a business to apply their skills in practice. For young men, a slightly more encouraging picture emerges as most of them finished their training and succeeded in taking up and using their skills for providing an income. Obviously, they do not run the risk of being tied down by responsibilities of unplanned parenthood. In addition, existing social norms and values might be more facilitative and they probably receive stronger encouragement and support from their social network to develop their own business.

Those whose livelihood strategies are mainly dependent on natural capital, had often very little formal education and/or training, but have developed profound knowledge essential for farm management. How to value their knowledge related to farming? Interestingly, the levels of human capital were higher in Duase and Aburaso than for Swedru which can be explained by the fact that Swedru is a predominantly rural community where farming is the major occupation. Duase, Apatrapa and Aburaso show a more diverse picture of livelihood strategies and opportunities with a wider range of income generating activities, which encourage people to invest in learning additional skills after the completion of formal education.

The hypothesis that having 'high' human capital increases individuals' opportunities to seek alternative income generating activities does not seem hold true for the data generated by the family case study. There seemed to be no strong association between people's access to human capital and their actual well-being. Access and opportunities to combine additional assets, individual attitudes and specific circumstances, are of greater relevance to succeeding in improving one's livelihood. The data seem to suggest that opportunities for training and apprenticeship do not seem to be a limiting factors but rather the socio-cultural and economic environment makes it difficult, for young women with young children in particular, to develop further their skills and provide for themselves.

Financial capital

Financial capital is a specific and important part of created resources. It consists of the finance available to people in the form of wages, savings, supplies of credit, remittances or pensions. It is often (by definition) the most limiting asset of poor people, but it is one of the most important, in that it can be used to purchase other types of capital, and also to have influence (good and bad) over other people *(SL Fact sheet 52, NRI)*.

Table 7 Access to financial capital

Financial Capital	**Young Younger than 35**		**Middle aged 35-55**		**Old above 55**		**Total**
	Men	***Women***	***Men***	***Women***	***Men***	***Women***	
Low	7	8	3	1	2	3	*24*
Average	2	7	1	3	-	2	*15*
Good	8	4	3	2	1	3	*21*
	N =17	N =19	N = 7	N = 6	N = 3	N = 8	*N = 60*

Assessment criteria

Low: no cash generating activities, or very unstable/unreliable such as occasional wage labour at construction sites. Depend on additional support (food, shelter). No money to invest in farming.

Average: Cultivation of food and cash crops (vegetables, citrus, oil palm and cacao), self-subsistence plus cash income through sale from farm produces. Ability to invest in farm, e.g. purchase of inputs, wage labour. Obtain additional support from children in form of labour and/or financially.

Good: Diversification of sources of income. Cultivation of food and cash crops (larger scale than average), sharecropping land to others and non-farm based incomes (NR and non-NR based) such as a market stall or a store. Illiquid assets like tools for carpentry, shoemaking and dressmaking, car, housing properties. Access to remittances from children staying elsewhere. Major occupation such as salaried employment, trading business (successful), carpentry, shoemaking etc.

The attempt to value financial capital was quite difficult as the information on sources of income were rather descriptive and often not ranked in terms of importance and priority to meet household needs. There were also no indicators of income and expenditure, actual cash flows and the actual dependency ratio. For example, data on the number of people living in one household and individual contributions to the household are very patchy. Occasionally, respondents expressed their perceptions of their well being, e.g 'struggling to survive', 'the business was doing well' or 'good returns from the cacao farm', which have been taken into account for the analysis. As there were no data on access to credits, pensions and savings either, we decided to conceptualise financial capital as the range of income sources and access to liquid and illiquid assets without weighting the dependency ratio. Consequently, the picture might be slightly biased as e.g. a young single man depending on occasional wage labour at a construction site with additional support from his family (food and shelter) might be better off in terms of financial capital (and well-being in general?) than a large family with both husband and wife providing an income through e.g. farming, trading and a shoemaking workshop.

Access to financial capital does not really differ between the younger and older generation but the nature and combination of financial assets vary to some extent. The data seem to indicate a trend toward diversification of livelihood strategies. Young married couples tend to widen their sources of incomes, especially in Duase, where there were a few examples of husbands that had their own workshop, and the wives earned additional income through trading, supplementing household expenditure on food by small-scale food crop farming. Single people seem to be more restricted in their options as they generally have no access to land and fewer resources (see discussion on natural capital). Older people's financial capital is more often confined to property ownership, salaried employment (past) or pensions and investments in natural capital, such as sharecropping, vegetable production and oil palm, citrus and cocoa plantations. Women are highly involved in the informal trading sector, such as petty fruit trading, cooked food, second hand clothes and fish/maize trade.

Lack of starting capital seems to be major stumbling block for people trying to establish and develop their own business. There are a few examples of young women trying to generate some cash through trading activities for investment in a hairdressing saloon as that is perceived as more profitable than petty trading. However, events such as pregnancy and marriage often hamper such efforts. Others start trading in low value goods, and after accumulation of some trading capital, it is invested in trade in higher value goods.

The importance of understanding differences in the livelihood circumstances associated with different types of farming is evident from the data. While food crop farmers were seen to be among the poorest of the poor, the case study material indicated that those involved in vegetable production (especially in Swedru), oil palm, cocoa and citrus plantations were doing quite well, supported by statements of respondents involved in such farming practices.

However, most people engaged in tree crop farming had their farms outside Kumasi region. People solely dependent on food crop farms with small plots of land were seriously struggling. A cost benefit analysis of several farm types, e.g. vegetable production, could contribute to an improved understanding which farm types are indeed profitable.

Older people, especially those who have become too old to engage in farming are highly dependent on their children for labour and financial support. Remittances from children abroad are often perceived as a characteristic of someone doing well in the community, however, quite a few older respondents mentioned they did not receive any support from their relatives abroad.

More information is needed about people's perceptions of a profitable business and the actual intra- and inter household cash flows and income and expenditure in relation to the dependency ratio before any further conclusions can be drawn about financial capital.

Limitations of the family case study analysis

Apart from the limited number of interviews and the unequal distribution of interviews (e.g. only 8 interviews in Apatrapa and 21 interviews for Duase), many of the respondents had moved away from their home villages. Therefore, it was difficult to compare the family case study data on livelihood strategies on a village level. Lack of resources and the types of data available only allowed for a basic comparison of the most important issues, for example the gradual shift from natural resource based livelihood towards non-NR based livelihoods.

It would have been interesting to investigate possible relationships between wealth status and access to particular assets. However, it has not been possible to link data on access to assets to local defined wealth categories, as only the wealth categories for the household heads were known. The wealth status of other family members and their households as perceived by the local people was not available.

Reflecting on our initial objective, which was to generate more detail on the actual dynamics of people's livelihoods, their access to and ability to combine assets and how outcomes are influenced by shocks and trends, policies and institutions, we conclude that the quality and type of data gathered is not sufficient to answer these questions. As the information in the family case study interviews did not include much detail on overall trends and individual's interactions with formal and informal institutions, the analysis has a rather stocktaking character, offering little insight into the dynamics that constitute people's livelihood strategies. What we have achieved is 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 that provide suggestions for areas to look at in more detail.

3. Livelihoods analysis from the household survey

Approach and methodology

Other than some basic descriptive statistics, the household survey data had not been analysed in detail under the KNRM project. In this phase of the current project, it was possible to make progress in preparing the data from the ACCESS data base for further analysis, and to run a number of queries on the data, designed to explore;

- How far the four study villages, Apatrapa, Aburaso, Duase and Swedru, were similar or different to the characteristics associated with poverty in urban, peri–urban and rural

villages as identified by the wealth ranking and village characterisation survey and presented in our analysis under output 2.1.

- How far the livelihood patterns of the households in the four villages, including access to assets and occupations, compared with the findings emerging from the family case study analysis.

General characteristics of the villages

A description of each village is given in appendix 11. The household survey covered four villages which has been selected to cover the urban, peri-urban and rural continuum. Basic details of age and occupation were collected for all household members, as well as their access to housing, facilities, land, employment etc.

Table 1 – Population and household data from household survey.

Village	Population[34]	Houses	Population per house	Households	Population per household
Apatrapa	1720	131	13.1	355	4.8
Aburaso	1441	104	13.9	354	4.1
Duase	1560	73	21.4	351	4.4
Swedru	760	57	13.6	201	3.8
	5481	**365**	**15.0**	**1261**	**4.2**

The types of housing are discussed in the KNRMP final technical report (R6799). Apatrapa stands out from the others as having a higher proportion (52%) of villa/bungalow type houses (associated with urban development), compared with 12 -24% for the other villages. In Duase, where urban development has been almost at a standstill as a result of land disputes, 85% of the houses are the traditional compound style, compared to 73% in Aburaso, 70% in Swedru and 43% in Apatrapa.

The survey categorised individuals as members of "houses" in the sense of occupying the same residential unit, and also as members of households, who "eat from the same pot", and consider themselves as an independent economic unit. Several households may live in one house, particularly where compound style housing predominates. Hence, Duase has the highest number of households per house (4.8) as well as a higher average population per house. Apatrapa, with over half of the houses in villa/bungalow style, has an average of 2.7 households and 13.1 people per house(table 1). Clearly urban development is associated with changes not only in house construction, but also in the patterns of co-residence. More needs to be know about patterns of mutual support between households before the implications of this can be understood.

Livelihoods and natural capital

The characteristics associated with poverty which were identified in the wealth ranking study include limited access to natural capital, manifested through;

- Dependency on food crop farming
- Dependency on temporary and insecure forms of agricultural land tenure.
- Landlessness/loss of agricultural land

[34] This is the population identified in the survey. Households on the wealth-ranking list were interviewed. Although the team aimed for 100% coverage, it is not known whether this was achieved.

Type of farming

Over all four villages, food crop farming continues to predominate in terms of its proportion of all farms (70%), followed by tree crops (15%) and vegetables (14%)[35]. Other farming enterprises such as pig or poultry rearing accounted for only 1% of farms. 62% of food crop farms, 55% of vegetable farms and 44% of tree crops, belonged to women. Men and women over the age of 35 own 70% of the plots.

Consistencies and some contrasts in this pattern emerge when the rural village (Swedru) is compared with the two categorised as peri-urban (Aburaso and Duase) and the urban village (Apatrapa) (table 2). Despite its smaller population, Swedru has the largest number of farms, reflecting its rural character, and the highest proportion of vegetable farms. Apatrapa and Aburaso both have a significant proportion of plots under tree crops. Agriculture in Duase is the least differentiated, with 87% of plots under food crop production.

Table 2 - Different farm types as % of total farms within each village

	Apatrapa 246 plots	Aburaso 215 plots	Duase 258 plots	Swedru 358 plots
Food crop	63%	74%	87%	60%
Tree crop[36]	30%	21%	9%	6%
Vegetable[1]	6%	4%	3%	34%
Other	1%	1%	1%	-

Considering the gender and age dimensions of farm type;

- All four villages have similar gender and age distribution of food crop plots, women owning around 60% and people over thirty five accounting for 70%.
- Access to tree crops is heavily weighted towards the older age group (80-100% of tree plots belonging to the over 35s). In Apatrapa, tree crop plots belong almost equally to men and women, while in Aburaso the distribution is 60% for men and 40% for women.
- Women claim two thirds of the vegetable plots in Swedru, while around 40% of vegetable plots are managed by people under the age of 35.
- The "other" category includes poultry (3 households in Apatrapa, 1 in Duase), pig rearing (1 household in Duase) and sugar cane (1 household in Aburaso).

Tenure type

The most common tenure type in all four villages is family land (56% of plots), followed by individually owned land (23%), then borrowed land (8%), rented (7%) and share cropped (6%). The villages vary in the proportions of different tenure forms (table 3).

Table 3 - Distribution of tenure types within the four study villages. (as a % of all food crop, tree and vegetable plots reported in the household survey)

	Apatrapa	Aburaso	Duase	Swedru
Family land	34%	57%	82%	54%
Individually owned	28%	25%	11%	25%
Borrowed	24%	11%	1%	1%
Cash rental	4%	4%	3%	12%
Sharecropped	9%	3%	2%	8%
Other	1%	-	<1%	-

[35] The data record the number of farms, and farm type, but not farm area.

[36] Some caution is needed in interpreting this data, since there is a risk that in some cases, men and women from the same household were referring to the same plots, giving rise to double counting.

The process of urbanisation has involved the gradual allocation of family lands for housing development and an increase in private ownership. As expected, the percentage of plots on family land is lowest for the most urbanised village, Apatrapa, which also has the highest rates of individually owned, borrowed and sharecropped lands. In Duase, family lands have been retained, and there is little involvement in the more temporary forms of tenure. The proportion of family and individual tenure in Swedru is similar to Aburaso, despite it being more "rural". The levels of share cropping and rental are also quite high, associated with their greater specialisation in both food crop and vegetable production.

A combination of the two criteria of food crop dependency and insecure tenure, might be a better indicator of poverty associated with difficulties in self-provisioning or lack of agricultural surplus. Table 4 presents the tenure status of food crop plots in the four villages. However, this should be treated with caution in the absence of any information on the proportion of food requirements grown, the proportion sold or the proportion purchased.

Table 4 - % Distribution of tenure types for Food Crop Plots within the four villages

Village	Family Land	Individually owned	Borrowed	Shared	Rented	Other
Apatrapa	46%	4%	37%	10%	2%	1
Aburaso	69%	10%	14%	3%	4%	-
Duase	89%	4%	1%	3%	3%	-
Swedru	69%	12%	1%	8%	10%	-

Half the food crop plots in the most urbanised village, Apatrapa are on land with temporary tenure forms, compared with 21% in Aburaso, 19% in Swedru and only 7% in Duase. While Duase has the highest dependency on food crop production, this takes place mainly on family land. It is the food crop producers in Apatrapa who may be the most insecure.

The gender associations of different forms of tenure are relatively weak, although women in all four villages had a slightly higher proportion of their farms on family land, while men had a higher proportion of farms individually owned or rented (Tables 5a and 5b). Men and women below the age of 35, had less access to individually owned land than the older age group. In Apatrapa and Aburaso, in addition to family land, younger people borrow land, while in Swedru they sharecrop or rent land, particularly for vegetable crops.

Table 5a - % Distribution of tenure types - women's farms within the villages

Village	Family Land	Individually owned	Borrowed	Shared	Rented
Apatrapa	39.4%	27.7%	22.6%	7.3%	3.0%
Aburaso	61.0%	23.0%	9.2%	3.4%	3.4%
Duase	85.2%	8.7%	0.7%	2.7%	2.7%
Swedru	57.3%	24.3%	1.0%	7.3%	10.1%

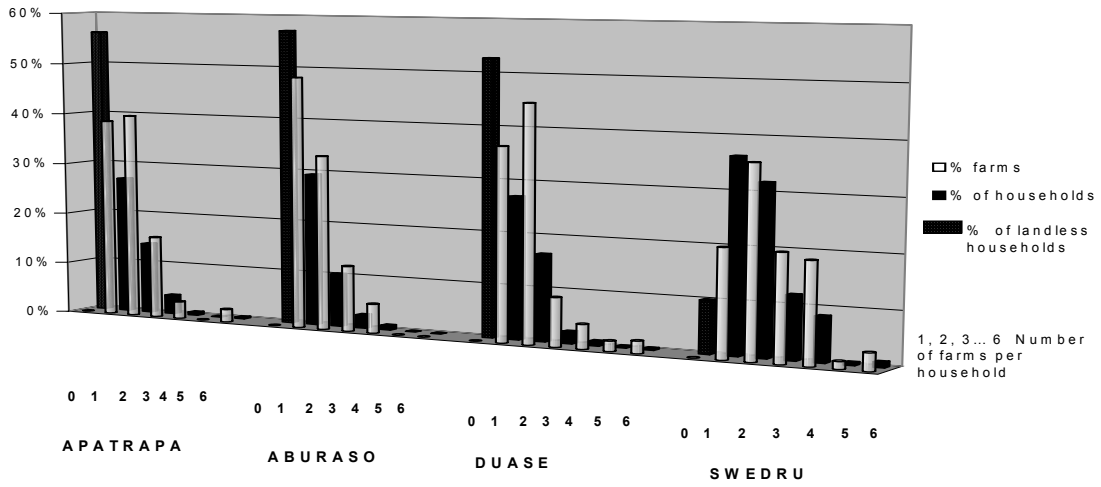
Table 5b - % Distribution of tenure types - men's farms within the villages

Village	Family Land	Individually owned	Borrowed	Shared	Rented	Other
Apatrapa	25.7%	30.3%	25.7%	11.0%	5.5%	1.8%
Aburaso	51.5%	28.9%	12.4%	2.1%	5.2%	
Duase	77.1%	15.6%	.9%	1.8%	3.7%	.9%
Swedru	47.9%	27.1%	.7%	8.6%	15.7%	

Landlessness and land distribution

The distribution of household access to farms (of all types) within the villages is shown in table 6. There is a marked contrast between the degree of landlessness in the urban and peri urban villages compared with the rural village[2].

Table 6: Distribution of farm ownership by household



Between 50-60% of households in Aburaso, Apatrapa and Duase do not have access to farms in the village; between 25-30% of their households have only one farm, 10-16% have two farms and less than 5%, own three or more. In the rural village, Swedru, only 10% of households have no farms, 36% have one farm, 32% have two farms and 22% have three or more.

This pattern is reflected on an individual level, but disparities in access appear between different age groups, with younger people in the urban and peri-urban villages having low rates of access to land (table 7).

Table 7 - Individual adults with access to land (as % of age and gender group)

	Apatrapa	Aburaso	Duase	Swedru
Women <35	7.9%	8.7%	11.5%	54.5%
Women =>35	28.3%	40.5%	48.1%	86.4%
Men <35	6.9%	8.9%	11.2%	47.1%
Men =>35	29.6%	32.3%	37.3%	77.1%
Total	**14.7%**	**18.5%**	**24.1%**	**66.8%**

The family case studies suggested that marital status was closely associated with access to land, and this is supported by household survey data. Between 54% and 63% of farms are owned by married people, while those who had never married owned only 5-7%. The other main farm owning groups in order, were the divorced/separated, widows and those in consensus unions. Heads of households (men and women) overwhelmingly account for the highest proportion of farms, 63.2% in Apatrapa, 65.6% in Aburaso, 62.9% in Duase and 62.5% in Swedru.

When access to farms outside the village is considered, Apatrapa has the highest proportion (6.9%) of adults with farms outside the village, particularly from the older age group (15.1% of older women and 15.8% of older men). Aburaso was next with 5 %of all adults, (10.1% of older women and 14.6% of older men), followed by Duase (2.2%) and Swedru (.5%) where people reported only three plots outside the village. Across the four villages, less than 3% of young men and women had land outside the village.

Loss of land

The highest number of cases of loss of land were reported in the urban village, Apatrapa, followed by Aburaso. People in Duase and Swedru experienced fewer losses (table 8). This is consistent with the observation that land losses are associated with urbanisation.

In Apatrapa, more women than men were affected by land losses. They also lost a larger area. In Aburaso and Duase, men were slightly more affected, and Swedru, only men reported land loss. In all cases, the older age group, both men and women, lost more land than people under 35.

Table 8 - Land losses by gender, age and village

	Apatrapa		**Aburaso**		**Duase**		**Swedru**	
	Acres	*Individs*	*Acres*	*Individs*	*Acres*	*Individs*	*Acres*	*Individ*
Women <35	63.5	35	17.5	20	7	3	0	0
Women =>35	241.0	97	90.0	32	10.5	8	0	0
	304.5	*132*	*107.5*	*52*	*17.5*	*11*	*0*	*0*
Men <35	68.0	31	23.5	21	4.2	3	8	5
Men =>35	157.0	61	91.5	40	19	9	15.5	7
	225	*92*	*115*	*61*	*23.2*	*12*	*23.5*	*12*
Total	**529.5**	**224**	**222.5**	**113**	**40.7**	**23**	**23.5**	**12**

The main cause of land loss was for "development", presumably for housing plots (table 9). Compensation in the form of housing plots was received by 7 women and 8 men in Apatrapa, and 5 women and 7 men in Aburaso, but none received compensation in Duase or Swedru.

Table 9 - Reasons for loss of land

Village	Development	Sand	Forestry	Farmer	other
Apatrapa	96%	0%	1%	0%	4%
Aburaso	96%	4%	0%	0%	0%
Duase	73%	15%	12%	0%	0%
Swedru	81%	4%	0%	6%	0%

Livelihood diversif*i*cation and employment

As outlined in the discussion under output 2.1, the results of the village characterisation survey and wealth ranking indicated the close association between certain occupations and poverty[37]. The discussion below explores the pattern of employment and specialisation

[37] The main occupations associated with poverty were petty trading and hawking, casual labour and unskilled labour in the construction industry, cooked food sellers, and food crop farming.

across the four villages, by age and gender. However, since the data is based on interviews with household members, it may exclude more temporary village residents, such as migrant labourers and the homeless who are often among the poorest.

The issues investigated were;

- The relative prevalence of the occupations most associated with poverty
- Combinations of occupations
- Unemployment

Occupations – prevalence and diversity

Overall, across the four villages the most common occupations (including both major and minor occupations) were, in order; farmer, trader[38], tailor, mason/carpenter, driver, cooked food seller/chop bar[39], beautician/hairdresser, mechanic, construction worker, civil servant, shoe maker, teacher, craft, business and electrician. The first two of these are in the core list associated with poverty.

The number of different occupations recorded by people in the four villages and the twelve most prevalent occupations are shown in table 10. The top twelve occupations are very similar across the four villages.

The less common occupations in Apatrapa include the making and marketing of alcohol, occupations connected with the church, health workers, draughtsmen, craft and other skilled trades such as painters, bakers, electricians, plumber etc. In Aburaso, the remaining occupations were business, teaching, shoe making and health work. In Duase, the other occupations were business, teaching, alcohol related, electrician. In Swedru, the remaining occupational group was construction workers.

Diversity of occupations may indicate a wider range of opportunities available, and hence a wider range of choices of strategy to avoid poverty. The diversity of occupations is highest for the most urban, Apatrapa (55 different occupations) and lowest for the rural village, Swedru, (25 different occupations). The number of households recording three or more occupations is 22.8% for Apatrapa, 16.7% for Aburaso, 17.1% for Duase and 3.0% for Swedru.

The relative importance of farming as an occupation

Farming was the most frequently cited occupation in three of the four villages. The degree of specialisation in farming was explored by querying the numbers of individuals who reported farming as their only occupation. The importance of farming as a sole occupation appears to decrease, the more urban the village.

Farming as the sole occupation is most important for the older generation. In all cases, young men had the lowest rates of specialisation in farming. The relatively equal involvement in agriculture by men and women of both age groups displayed in Swedru, contrasts with the pattern in the other villages where there is greater involvement of women of all ages compared to men, and of older people compared to younger (table 11).

[38] Trader indicates petty or informal trade; larger enterprises are defined as “business”, but the distinguishing criteria are not made explicit.

[39] These were not distinguished in the survey, although chop bar operations tend to be larger and often employ staff.

Table 10 - Number and frequency of occupations in four study villages.

Village	Number of occupations	12 most common occupations as % of total reported occupations (major and minor)	
Apatrapa (n=882)	55	Farmer	26.3
		Trader	20.9
		Mason/Carpenter	11.5
		Tailor/dressmaker	7.9
		Chop bar	4.2
		Driver	3.9
		Construction worker	3.5
		Beautician/hairdresser	3.1
		Mechanic	2.8
		Teacher	2.5
		Civil servant	2.1
		Business	1.4
Aburaso (n=766)	39	Trader	30.4
		Farmer	26.1
		Tailor/dressmaker	6.4
		Mason/Carpenter	6.3
		Chop bar	5.2
		Driver	4.7
		Beautician/hairdresser	3.9
		Construction worker	3.5
		Mechanic	2.7
		Civil servant	2.2
		Craft worker	1.2
		Electrician	1.2
Duase (n= 808)	44	Farmer	30.1
		Trader	26.5
		Tailor/dressmaker	7.9
		Mason/Carpenter	4.6
		Shoe maker/cobbler	4.5
		Driver	3.7
		Beautician/hairdresser	3.3
		Mechanic	3.3
		Civil servant	3.1
		Chop bar	3.0
		Craft	2.5
		Construction worker	1.1
Swedru (n=403)	25	Farmer	68.7
		Trader	11.9
		Tailor/dressmaker	3.5
		Driver	3.2
		Chop bar	1.7
		Beautician/hairdresser, mechanic, mason/carpenter, teacher, civil servant, church related, and alcohol related	All <1.5%

Table 11 - People farming as their sole occupation (as % of each age/gender category)

	% of total adults (15 and over)	% of Women =/< 35	% of Women >35	% of Men =/<35	% of Men >35
Apatrapa	12.0%	4.7%	30.7%	3.3%	19.7%
Aburaso	12.0%	3.3%	32.3%	3.6%	23.1%
Duase	14.3%	5.6%	37.7%	3.2%	17.3%
Swedru	53.3%	42.1%	67.8%	40.0%	62.7%

Gender and age specialisation of occupations

Other occupations also show definite patterns of age and gender association. Tables 12 to 15 show the most frequent *major* occupations by village, gender and age. Occupations fall into several categories:

- those undertaken by men and women across the age range, for example, trade, farming, construction, civil service, business;
- those which are specific to young men – particularly craft work, shoe making, electrical work;
- those specific to young women - beautician/ hairdressing, tailoring/dressmaking (the latter predominantly but not exclusively)
- those undertaken by women of all ages - operating chop bars;
- those undertaken by men of all ages - drivers, mechanics and masons/carpenters.

Table 12 - Apatrapa: Major occupations by gender and age group

Age gp	Male	%of group	Female	%of group
15-35	1. Carpenter	25.6%	1. Trader	21.7%
	2. Trader	7.8%	2. Tailor	16.7%
	3. Driver	7.2%	3. Beautician	7.4%
	4. Mechanic	4.5%	4. Farmer	5.6%
	5. Farmer	3.9%	5. Chop bar	4.9%
	6. Construction	2.1%	6. Construction	1.9%
	7. Civil servant, craft,	both 1.5%	7. Civil servant, baker	both 1.1%
	Student	25.1%	Student	12.6%
	Unemployed	7.3%	Unemployed	20.9%
>35	1. Farmer	27.1%	1. Farmer	35.7%
	2. Carpenter	9.9%	2. Trader	29.8%
	3. Driver	6.5%	3. Chop bar	5.4%
	4. Mechanic	6.0%	4. Teacher	3.5%
	5. Teacher	5.9%	5. Business,	each 1.5%
	6. Business, civil servant	each 4.6%	construction, civil	
	7. Trader	3.9%	servant	
	8. Construction	3.3%		12.2%
	Retired	2%	Retired	6.8%
	Unemployed	2.6%	Unemployed	

Other occupations: For women: bar keeper, head loading, church roles. For men: distiller/alcohol, draughtsmen, church, drivers mate, painter, steel bender, shoe maker, farm labour, building contractor, electrician, surveyor, health worker. Single individuals reported working as a barber, chemist, chop bar, district officer, secretary, footballer, miner, musician, photographer, plumber, police, security, vulcaniser and welder.

Table 13 - Aburaso: Major occupations by gender and age group

Age gp	Male	% of group	Female	% of group
15-35	1. Trader	19%	1. Trader	36.1%
	2. Carpenter	13.7%	2. Tailor	13.7%
	3. Driver	10.5%	3. Beautician	9.3%
	4. Mechanic	6.1%	4. Chop bar	7%
	5. Construction	4.8%	5. Farmer	3.6%
	6. Farmer	4.4%	6. Construction	1.7%
	7. Electrician	2.8%		
	8. Craft	2.4%		
	9. Shoemaker	2%		
	Student	19.4%	Student	9.4%
	Unemployed	5.3%	Unemployed	16.4%
>35	1. Farmer	24.7%	1. Farmer	38.6%
	2. Carpenter	10%	2. Trader	33%
	3. Civil servant	9%	3. Chop bar	7.6%
	4. Trader	8.4%	4. Teacher	1.3%
	5. Driver	7.7%		
	6. Mechanic	4.6%		
	7. Construction	3.8%		
	8. Tailor	2.3%		
	Retired	10.8%	Retired	10.8%
	Unemployed	3.1%	Unemployed	3.8%

Other occupations: For women: (<1.5% of either age category) civil servant, nurse, priestess, typist, domestic worker. For men; teacher, contractor, painter, health worker, security guard, farm labourer, chop bar, distiller, doctor, lotto seller, plumber, minister, salesman, shoe shiner, station master, typist, officer. Small numbers of both men and women were involved in business.

Table 14 - Duase: Major occupations by gender and age group

Age gp	Male	% of group	Female	% of group
15-35	1. Shoe maker	14%	1. Trader	32.2%
	2. Trader	10.4%	2. Tailor	14.8%
	3. Carpenter	10%	3. Beautician	8.5%
	4. Mechanic	9.2%	4. Farmer	6.6%
	5. Driver	6.4%	5. Chop bar	4%
	6. Tailor	4.8%	6. Civil servant	1%
	7. Farmer	3.6%		
	8. Craft	3.2%		
	9. Construction	2%		
	10. Civil servant	1%		
	Student	25.9%	Student	17.5%
	Unemployed	6%	Unemployed	13.5%
>35	1. Farmer	20%	1. Farmer	40.1%
	2. Trader	12%	2. Trader	31.6%
	3. Civil servant	9.4%	3. Chop bar	4.7%
	4. Driver, carpenter,	both 8%	4. Tailor, civil servant,	both 1.9%
	5. Craft	5.3%		
	6. Mechanic, Business, Teacher	each 2.7%		
	7. Construction	2%		
	Retired	10.7%	Retired	13.2%
	Unemployed	1.3%	Unemployed	3.3%

Other occupations: For women: business, domestic worker, baker, construction worker, health worker, police and teacher. For men: electrician, painter, lotto, tapper, auditor, farm labourer, chief, drivers mate, health worker, fitter, forest inspector, church, photographer, rubber cutter, domestic worker, station master, store assistant, personnel manager, toilet operator.

Table 15 - Swedru: Major occupations by gender and age group

Age gp	Male	% of group	Female	% of group
15-35	1. Farmer 2. Driver 3. Trader 4. Carpenter, mechanic 5. Civil servant Student Unemployed	43.6% 10.7% 4.7% both 3.5% 2.4% 24.7% 1.2%	1. Farmer 2. Tailor 3. Trader 4. Beautician 5. Chop bar Student Unemployed	49.5% 9.1% 5.8% 4.2% 1.7% 14.9% 13.2%
>35	1. Farmer 2. Teacher 3. Civil servant, Driver, 4. Pastor, trader Retired Unemployed	71.1% 6% both 3.6% both 2.4% 2.4% 0%	1. Farmer 2. Trader 3. Tailor Retired Unemployed	81.3% 9.3% 1.6% 5.1% .8%

Other occupations: For women: business. 3.4% of older women ran chop bars as a subsidiary occupation to farming. For men: construction work, farm labour, shoe maker, craft, drivers mate, electrician and tailor.

Poverty Implications

It is notable that the occupations most associated with poverty are those most important to women. Farming is the sole occupation for over 30% of older women in all four villages and the major occupation for more than 35%[40]. When trade, cooked food selling, and construction labour are added, the poverty associated occupations account for 72% of older women's major occupations in Apatrapa, 79% in Aburaso, 76% in Duase and 91% in Swedru.

For young women, the same occupations account for 34% of their major occupations in Apatrapa, 48% in Aburaso, 43% in Duase and 57% in Swedru.

For men the picture is rather different, since the poverty linked occupations which involve men, farming, trading and unskilled labouring in the construction industry, are less dominant. However, farming is still important for older men. Poverty associated occupations, including farming account for 34.3% of older men's major occupations in Apatrapa, 37% in Aburaso, 34% in Duase and 73.5% in Swedru. Swedru is the only village where the pattern for older men is similar to the pattern for women of the same age group across the 4 villages.

For young men, farming, trading and unskilled labouring account for only 13.8 % of major occupations in Apatrapa, 28.2% in Aburaso, 16% in Duase, but 48.3% of the major occupations in Swedru (of which 43.6% are farming).

Combinations of occupation

Some occupations appear easier to combine with others, while some more specialised occupations are a sole pursuit.

Men's occupations which are mainly pursued as single occupations are driver, mechanic, shoemaking, craft and electrician. Carpentry is more frequently combined. Of women's occupations, hairdressing and beautician work is the most specialised single category.

[40] Although not all are exclusively food crop farmers.

Men and women's occupations usually pursued alone are business, the professions, and civil service. Those most frequently combined are farming, casual labour or construction work, trade, chop bar and tailoring, often as a secondary or minor occupation.

Table 10 above, indicates the importance of farming as a *sole* occupation, but when participation in farming in combination with other activities is considered, the figures are much higher. In Apatrapa 22.4% of all adults are farming, 23.7% in Aburaso, 26% in Swedru and 67.4% in Swedru.

Trade can also be an important sole occupation, particularly in Aburaso where it was sole occupation for 22.1% of adults. In any combination, trading was undertaken by 17.4% of adults in Apatrapa, 27.6% in Aburaso, 23.3% in Duase and 11.7% in Swedru.

The location of the village is important in increasing employment opportunities, in particular, proximity to Kumasi provides the opportunity to engage in employment in the city and commute from the village. The main occupations of the people who reported working in Kumasi were trader, driver, mechanic, civil service, tailor, beautician/hairdresser, carpenter and business. Aburaso has the highest proportion of people pursuing their major occupation in Kumasi (17.8%) followed by Duase (17.2%) Apatrapa (9.8%) and Swedru (4.7%).

Table 16 draws on data from a different source, showing the occupations of passengers travelling to Kumasi showing the importance of Kumasi for traders, both on a daily and intermittent basis.

Table 16 - Occupations of Passengers Sampled in Trotro Survey at 13 Trotro Stations in the Kumasi City Region, 1999

	No. of Daily Passengers from Poor or Poorest Occupations	% of Daily Trotro Passengers in Sample (406)	No. of All Passengers from Poor or Poorest Occupations	% of All Trotro Passengers in Sample (883)
Hawkers	17	4%	20	2%
Traders *	94	23%	399	45%
Food Sellers	5	1%	9	1%
Unemployed	-	-	24	3%
Labourers	30	7%	32	4%
Farmers **	1	0%	52	6%
Cobblers	5	1%	7	1%
Total	**152**	**37%**	**543**	**61%**

Source: Williams (2000): Trotros, Passengers and Commuters in the Peri urban Districts of the Kumasi City Region. KNRMP Report, March 2000, Tables 10 and 11.
N.B. * Not all traders are Petty Traders,** Not all farmers are Food Crop Farmers

Apprenticeships

Given the higher proportion of men involved in skilled occupations, access to apprenticeships in each village was analysed. Young men have the highest rates of involvement in apprenticeships in all four villages. Older men and young women come next, and older women have had the least involvement in apprenticeships.

Table 17 - Adults having undertaken an apprenticeship (as % of their age and gender group)

	Apatrapa	Aburaso	Duase	Swedru	% All adults in category
Women <35	29.5%	25.8%	29.6%	24.0%	**27.9%**
Women =>35	5.4%	7.0%	9.9%	6.8%	**7.4%**
Men <35	43.2%	41.3%	50.6%	27.1%	**43.2%**
Men =>35	27.0%	34.6%	37.3%	19.3%	**30.7%**
% All adults in village	**28.7%**	**28.2%**	**32.1%**	**18.7%**	

Employment, availability for work and unemployment rates by age and gender.

Rates of unemployment are given above in tables 12-15 as a percentage of all adults in each gender/age group (issues around the definition of unemployment are discussed in appendix 3). These show that for every village, the rates of unemployment are highest for young women (between 13-20%), followed by young men, older women and older men.

Table 18 shows unemployment as a percentage of those who are available for work, as distinct from students, the sick or disabled, or the retired. Men in the 15-35 age group, have the lowest availability for work (80% or less) as this category contains the highest number of students. This is also an indication of the extent to which boys are more likely to continue at school or in further education compared with girls. For the age group 35 and over, men appear to have higher availability for work – they are fewer in number than women, and fewer of them are retired.

Rates of unemployment are higher in the more urban villages. As a percentage of people over age 15, the rates were for Apatrapa 11.2% , Aburaso 8.6%, Duase 7.1% and Swedru 4.4%

Table 18 - Availability for work and unemployment.

		No. in group	% available for work	in work	Unemployed as % of the total group	Unemployed as % of available for work
Apatrapa	Women <35	366	87.2%	243	20.8%	23.8%
	Women >35	205	87.3%	165	6.8%	7.8%
	Men <35	331	74.6%	223	7.3%	9.7%
	Men >35	152	94.7%	140	2.6%	2.8%
Aburaso	Women <35	299	90.6%	222	16.4%	18.1%
	Women >35	158	88.6%	134	3.8%	4.3%
	Men <35	247	80.6%	186	5.3%	6.5%
	Men >35	130	89.2%	112	3.1%	3.4%
Duase	Women <35	304	82.6%	210	13.5%	16.3%
	Women >35	212	85.4%	174	3.3%	3.9%
	Men <35	251	74.1%	171	6.0%	8.1%
	Men >35	150	89.3%	132	1.3%	1.5%
Swedru	Women <35	121	84.3%	86	13.2%	15.7%
	Women >35	118	94.9%	111	0.8%	0.9%
	Men <35	85	75.3%	63	1.2%	1.6%
	Men >35	83	97.6%	81	0.0%	0.0%
		3212	**84.9%**	**76.4%**	**8.5%**	**10.0%**

Conclusions

The findings support the observation that access to natural capital declines with urbanisation. To some extent this may be mitigated by accessing land outside the village, as in the case of Apatrapa. Food crop production is still important for a significant proportion of people, particularly women in the older age group. Insecure land tenure, land losses and limited access to land are more common in the urban and peri-urban villages.

Employment opportunities expand with proximity to Kumasi, but different groups vary in their access to these opportunities. Young men appear able to take advantage of these. Others are clearly not benefiting, relying on the shrinking agricultural base and intermittent casual employment. The highest rates of unemployment are among young women.

The poverty associated occupations are among the most prevalent across the four villages. These constitute a high proportion of the occupations of women, suggesting that poverty is strongly gender associated.

Limitations and areas for further investigation

People's own perceptions of the relative poverty associated with different occupations and combinations of assets have not been investigated across the four villages. The household survey data provides detailed information into the distribution of these, but no qualitative or quantitative assessment of the consequences, nor the different perspectives of men and women or younger or older age groups.

A clearer picture is needed of the social changes in family and gender roles and expectations as opportunities diversify, housing styles change and work locations are separated from residence. These have consequences for intra and inter household relationships and the extent of mutual support, particularly between the generations.

More needs to be known about decision making and livelihood strategies particularly of the younger age groups. This would help in understanding the processes of change in agriculture and natural resource use, particularly the exit of young people from agriculture and whether this is attributable to the push factors of limited land availability and quality, or the pull factors of urban employment opportunities and higher returns to labour.

Appendix 1 - Characteristics of 'the poor/est' identified by data source

The following tabulation aims to draw together these various study outputs in terms of their characterisation of the poor/est- with the aim being to look for similarities that may be used in cross-comparison at a later stage.

Source	Village	Characteristics[41] Poor	Very poor
Wealth ranking study[42] (R6799b.)	**Urban** Apatrapa	Hawkers Petty traders Cooked-food sellers Construction workers Cobblers Food crop farmers Carpenters Hairdressers Kiosk operators Dressmakers	Unemployed Casual labourers Farmers on building plots Disabled without support Aged without support
Family Case studies[43] (R6799a.)		Petty trader in foodstuffs Capital from mother	Unemployed Engages in casual labour Family lost all lands No support from family
Wealth ranking and household survey analysis[44] (R6799c.)		Casual labourers Low educational status	
Homelessness study[45](R6799d.)		Young adults 23-35 years Migrants Casual labourers Lack of resources No links with village institutions or groups	
Wealth ranking study	**Peri-urban** Aburaso*	Hawkers Petty traders Cooked-food sellers Construction workers Cobblers Food crop farmers	Unemployed Casual labourers Small scale farmers (on plots) Disabled without support Aged without support

[41] The strata determined during the wealth ranking exercise (including the categories 'poor' and 'very poor' were are used as selection criteria for the family case studies, with families selected from each wealth strata including 'poor' and 'very poor'. Characteristics of 'the poor' identified through the analysis of wealth ranking and household survey data using regression analysis techniques were not aligned with the wealth ranking- so do not fall specifically into 'the poor' or 'very poor' categories. Similarly, the homelessness study was not based on wealth ranked definitions- but the characteristics identified are closely aligned with those of 'the poor' and 'poorest' from the wealth rankings.
[42] See Appendix 5 for further details on the aims, methods and limitations of the wealth ranking study
[43] See Appendix 6 for further details on the aims, methods and limitations of the family case studies
[44] See Appendix 8 for further details on the aims, methods and limitations of the wealth ranking/ household survey statistical analysis paper.(p.14)
[45] See Appendix 9 for further details on the aims, methods and limitations of the homelessness study.

Family Case studies	Aburaso*[46]	Hawkers (fruit) Buys on credit Family lost lands	Food crop farmer Single parent Provide his own food Advanced in age Low productivity Provide own labour on farm
Homelessness study		Young adults 21-28 years Migrants Casual labourers No links with village institutions or groups Lack of resources	
Wealth ranking study	Duasi* (check)	Hawkers Petty traders Cooked-food sellers Construction workers Cobblers Food crop farmers	Unemployed Casual labourers Small scale farmers (on plots) Disabled without support Aged without support
Family Case studies		Unemployed Lack of access to land due to population pressure Depends on other family members for food	Toilet attendant Wife trades in local leaves Wife bread winner of family Children sent to sister outside the village Cannot afford renting farm land
Homelessness study		Wider age range 21-40 years Typically migrants Casual labourers No links with village institutions or groups Lack of resources	
Wealth ranking study	**Rural** Swedru	Akpeteshie distillers Hawkers Petty traders Cooked-food sellers Food crop farmers	Casual labourers without farm Unemployed Disabled without support Aged without support
Family Case studies		Share cropping food-crop farmer Also occasional casual labourer Wife sell maize porridge Support from wife	food crop farmer Little support from children Provide own labour on farm Advanced in age
Homelessness study		None (no homeless identified)	
Final workshop proceedings (p.125)	General	Farm temporarily-borrowed land Casual labour on construction sites Hawking in Kumasi Rely upon family support	

[46] * One key informant of three in each these villages identified 4 wealth groups as opposed to five. Whilst there was broad uniformity of characteristics amongst the three, the 'different' key informant also identified the following characteristics of 'the poor': masons, carpenters, hairdressers, kiosk operators

Appendix 2 - Occupational statistics from the VCS

Table 6b. Occupational statistics from the VCS

Percentage of villages in which half or more people are engaged in farming full-time

Occupation	**Source: VCS (R6799j.)**		
Sex/ Age	**Rural**	**Peri-urban**	**Urban**
Men - old	100%	79%	9%
Men - young	94%	58%	9%
Men - mean average	***97%***	***69%***	***9%***
Women - old	97%	100%	9%
Women - young	100%	34%	0%
Women - mean aver.	***99%***	***67%***	***5%***
Overall mean average	***98%***	***68%***	***7%***

Table 6c. Occupational statistics from the VCS

Percentage of villages in which half or more people are engaged in farming plus other jobs

Occupation	**Source: VCS (R6799j.)**		
Sex/ Age	**Rural**	**Peri-urban**	**Urban**
Men - old	0%	8%	0%
Men - young	6%	10%	0%
Men - mean average	***3%***	***9%***	***0%***
Women - old	0%	5%	0%
Women - young	0%	16%	0%
Women - mean aver.	***0%***	***11%***	***0%***
Overall mean average	***2%***	***10%***	***0%***

Table 6d. Occupational statistics from the VCS

Percentage of villages in which half or more people are not engaged in farming

Occupation	**Source: VCS (R6799j.)**		
Sex/ Age	**Rural**	**Peri-urban**	**Urban**
Men - old	0%	13%	91%
Men - young	6%	34%	91%
Men - mean average	***3%***	***23%***	***91%***
Women - old	0%	3%	91%
Women - young	0%	3%	100%
Women - mean aver.	***0%***	***3%***	***96%***
Overall mean average	***1.5%***	***13%***	***94%***

Appendix 3 - Unemployment

None of the surveys in the KNRM project provided a clear definition of unemployment or the 'unemployed' although it was identified as a characteristic of the 'poor' and 'very poor' in the wealth ranking exercise and family case studies.

In general, unemployment is considered to be a temporary rather than a permanent state. People who are identified as unemployed may be able bodied, who can work when given the opportunity. Casual labouring is not considered a permanent job, with payment on a daily basis. As such, an individual engaged in casual labour may define him or herself to be 'unemployed',

Alternatively, as found in the family case studies (the primary source of discussion on unemployment), a women trained as a hairdresser, but lacking capital to establish her business defined herself as unemployed. Although she has worked, hopes to work, and perhaps even does odd bits of work now and again, at the point of questioning was not working, and thus defined herself as unemployed.

A further category includes domestic work, which has been defined (perhaps by the interviewers) as unemployment.

Appendix 4 - Determining factors of poverty for food crop farmers

Source	Village	Factors
PRA/ KNRM Project Inception Report (R6799h.)	Abuakwa	Land scarcity Lack of credit lack of storage facilities lack of access to market - low prices offered for farm produce
	Daku	Lack of credit reduced soil fertility inadequate extension services high cost of inputs
	Duasi	Lack of credit Lack of skill/extension services High cost of inputs (labour, chemicals)
	Swedru	Lack of credit High cost of labour High cost of inputs Pest attack
	Nyameani	Lack of credit high cost of inputs lack of access to market - low prices Lack of extension services
	Domeabra	High cost of inputs marketing problem lack of credit lack of extension services
Final Technical Report (R6799f.)	**General**	Reduced farm sizes due to fragmentation as families increase in size Loss of land to housing decline in fallow period and soil fertility Food self sufficiency declined due to declining farm yields inability to farm large areas low productivity inability to invest in further inputs
Proceedings of Final Workshop (R6799e.)		Lack of credit high cost of inputs inadequate extension services pests and diseases

Appendix 5 - Wealth ranking study

Aims

The wealth ranking study was carried out in four villages in peri-urban Kumasi with the aims being to find out what characteristics the local villages use in judging relative wealth of individuals; to establish the relative wealth of individual households within the villages within several broad categories of wealth; to identify the poorest and most vulnerable in the villages; and to provide a basis for selection of households and individuals for the case studies across the whole socio-economic spectrum.

Methods

The methodology involved two main phases

- Four villages were selected from those targeted in the village characterisation survey, stratified by urban, peri-urban and rural zones within the peri-urban interface. These villages were Apatrapa - urban, Aburaso and Duasi - peri-urban, and Swedru - rural.
- In each village, three key informants (two male, one female) worked with the researchers to identify what their ideas of wealth within the village were, define the number of wealth groups they felt were present, and then categorise all of the households into one of these wealth groups.
- The ranks were given score with the least (poorest) as 1, increased in the ascending order to the wealthiest. The rank for each informant were divided by the number of ranks and then averaged for all the informants.

Limitations

- The wealth ranking exercise is based on subjective and relative criteria.
- The number of wealth strata identified by each key informant varied from four to six, with households ranked from 1- the poorest strata, up to the richest strata.
- Whilst this was a positive reflection of the perceptions of that individual, it has made comparison between the different informants difficult.
- Nevertheless, although there was a variation in the number of strata identified by each informant, and the criteria evident in each, there was a high degree of agreement over the key characteristics of rich and poor.

Findings

The outcome of the study are outlined in Appendix 1. Characteristics of 'the poor' or 'poorest' identified by data source

Appendix 6 - The Family case studies

Aims

- The family case study was undertaken to provide an in-depth understanding of individuals and families within the peri-urban interface.
- The study aimed to explore the livelihood pattern of the poor through time, identify their coping and survival strategies with urbanisation
- The study also focused upon the links between individuals, households, families and the village as a whole.

Methods

- Semi-structured interviews were used to ask individuals and families about their livelihood characteristics and strategies.
- The villages selected were the same as those identified in the wealth ranking exercise
- The unit of study was the family; the extended family system which consists of two or more households united by consanguineal kinship bonds.
- In identifying the families, the wealth ranking and household survey were used. The very rich people identified in the villages were excluded in the exercise. One household each was chosen from three wealth categories - very poor, poor and rich in each village using an ordinary random selection. All members of the family in which the chosen household head falls and who are above 18 years and available at the time of interview were interviewed.
- The interviewees were both migrants and indigenous males and females.

Limitations

- The study relied on the wealth ranking exercise to identify the people based on their wealth status. Thus where a person was categorised as poor but found to be otherwise affected the result.
- The study was limited to three people in each village for interview. As a result, a choice was made between gender and wealth status, with in some cases a poor male indigenous person was chosen while in another village a poor female migrant was chosen. This small, differential sample makes extensive comparison difficult.
- The number of respondents, representing different age groups and gender related to a specific village, is very limited and can only contribute to a very basic understanding of trends in livelihood strategies as affected by urbanisation patterns

Findings

- The poor are constrained by their lack of access to capital assets. Most families have lost land in the peri-urban villages and this has forced most members to move out or turn to casual labour and trading. Those who remain in farming are the poor members who are forced to go into share cropping or farm on building plots for livelihood.
- Links within the family are very complex. The relationship in terms of family support is confined to intra-household levels with the extended family sometimes providing material support. The poor can find it difficult in enhance their assets, whether physical, financial, human or social due to the lack of support.

Appendix 7 - Paper using quantitative methods to analyse the wealth ranking data

Aims

- To test the consistency of the wealth ranking data. i.e. to determine whether the ranks assigned by the informants were generally consistent for the same household.
- To analyse the wealth ranking and household survey data to identify factors affecting wealth ranking

Methods

- The wealth ranking exercise involved the use of average measures to categorise the wealth status of the people based on how the informants reported them The ranks of the informants were converted to scores by dividing the ranks for each informant by the number of ranks and then average for all informants.
- The reporting was based on individual assessment of the household heads and there was therefore variations in the reporting of their status.
- To test the level of variation in reporting, the Kendall's coefficient of concordance and the Spearman rank correlation were used. Kendall's coefficient of concordance was used to measure the consistency of reporting while the Spearman rank correlation compared the pairs of informants.

Limitations

- The differences in ranking affects the interpretation of the wealth status of the individual.
- Differences in the meaning of the wealth status to the individual is also a limitation on the result of the calculation.
- Nevertheless it gives a clear picture on the nature of reporting of the categories of wealth status of the individuals.

Findings

Consistency

- The use of consistency measures for informant's ranking across the wealth ranking exercises in the four villages demonstrated a high level of correspondence between the informants- and it can be assumed that the rankings of each informant is consistent[47] (Wealth ranking of villages in peri-urban areas of Kumasi, p.7)

Factors affecting wealth ranking

- The use of multiple regression models on the wealth ranking and household survey data on one village: Aburaso. Whilst the values varied, the inference from each model was similar, summarised as follows:
  - male headed households and households with radios have greater wealth
  - newcomers to the village are perceived to have greater wealth
  - of those households with outside farms, those with tree crops are the wealthiest
  - the richer the household the larger the number of adults over 15 years
  - high numbers of household members without education or high numbers of casual labourers lower the wealth ranking
  - wealth ranking increases as the dependency ratio increases.

[47] Kendall's coefficient of concordance was utilised on the informants' ranking in all four villages - giving a measure of consistency between the rankings (0 = no association, 1 = exact correspondence). All of the villages fell between 0.77 (Duase) and 0.85 (Swedru).

Appendix 8 - Homelessness study

Aim:

- The study was designed to provide an in-depth understanding of homelessness in the peri-urban Kumasi
- to identify how the homeless are coping with changing livelihood in the villages as a result of urbanisation.

Methods

- The study involved the interviewing of all persons regarded as homeless by the village in which they live, using a semi-structured questionnaire.
- The questionnaire covered the socio-economic conditions of the person; where they comes from, why they stay in the village, how long they have been in the village, how long they have been homeless, and their means of support and links with the larger village.
- The number of homeless identified were Apatrapa - 4, Aburaso - 3, Duasi, 4 and Swedru - 0.

Limitations.

- One of the major limitation of the study was the definition of the concept of homeless. The concept of homeless was defined by the village during the interview. The definition therefore differed from one village to another though there were some similarities.
- The number of homeless persons identified was small (numbering between three and four). This does not give any meaningful assessment of the situation and the characteristics of the poor. However, their livelihood is an indication of the level and character of homeless in changing urbanisation in the villages.
- The homeless situation was more stranger defined and this is expected to raise hope for the increasing wealth situation of the indigenous people in the villages.

Findings

- Homelessness is associated more with migrants and within the more urbanised villages.
- The homeless are constrained by their lack of human capital assets, physical assets and social capital assets. Their level of education is low and they lack necessary skills and training. Their main occupation is often casual labouring. They may engage in food crop farming on building plots as temporary borrowing. Their fiscal assets are weak and they have poor access to resources.

Appendix 9 - Village Characterisation Survey (VCS)

Aim:

- The study aimed to determine the characteristics of peri-urban villages in terms of their natural resources management, village structures and relationship to Kumasi.
- It was also designed to help place village based studies within the wider peri-urban setting and provide the information at a village level for the project outputs.

Methods

- The study involved a stratified random sample of 66 villages within a 40km radius of Kumasi on the basis of access to the city.
- Three zones of accessibility were distinguished - on-road (no more than 2km from the main road), off-road (more than 2km from the main roads) and a zone within 5km of the city centre main market.
- on-road - the distance from Kejetia (the main lorry park) along the road was randomly selected, then a distance between 0 and 2km from the road was randomly selected, and then the side of the road (left or right) was randomly selected. The village nearest to the resulting point was then selected. A total of 24 villages were selected.
- Off-road - Using Kumasi as a reference point, 60 degree angles were drawn. Three concentric zone of 10km apart were also drawn Within each zone, 12 villages more than 2km off the main roads were randomly selected. A total of 36 villages were selected to represent this sector.
- Zone - Six villages within a radius of 5km from Kumasi were randomly selected.
- Using a detailed questionnaire, data were collected by interviewing key informants in each village that was selected. The key informants included chiefs, elders, assembly men, other village leaders, women and the youth.
- Topics covered included demography, village institutions, facilities, land use and tenure, land prices and farm rents, employment, agriculture, commerce, environmental problems and social issues.

Limitations.

- the data were obtained from key informants, and therefore has a strong subjective element.
- The purpose of the data collection was to provide a baseline study of the natural resources profile of the Kumasi city region, and may not be detailed enough to give a clear in depth view of poverty.
- It is a village level study and provides information about availability of various facilities and characteristics of the village. It does not provide exact information on individual households or villagers access to facilities.

Findings

- The study came out with basic categorisation of the 66 villages into three main types. these are urban, peri-urban and rural villages within the peri-urban area of Kumasi.

Appendix 10 Household survey

Aim:

- To provide quantitative data on household structure, occupations, access to assets and other livelihoods dimensions comparing rural, peri-urban and urban villages.

Methods:

- Household interviews with all households in four case study villages, using a structured questionnaire.
- Data was collected both on the 'house' (in the sense of residential unit) and on the households (defined as people who live together and eat from the same pot and consider themselves to be an economically independent unit.)
- Data was collected on over 1000 houses and over 5000 individual household members.
- The questionnaire covered a wide range of topics, including land tenure, access to plots, land loss, major and minor occupations.

Limitations:

- The household survey is an important source of detailed information on household access to assets and occupational patterns. A very large data set was collected and entered into ACCESS, but only very limited analysis completed during R6799 which did not have the resources to undertake a detailed analysis of the data.
- The available data is mainly on house characteristics and aggregate statistics on land and occupation rather than comparing across villages or differentiating information by age, gender or wealth rank. (Some of this has been undertaken in the current project).
- Lack of clarity on the procedures followed for questioning individuals on resource access and land loss, hence a possibility of some double counting, e.g. of household land and land losses.
- The definition of "farms" used during the study, in terms of scale and geographical location is not clear.

Findings:

- The house in many cases contained more than one household, with densities of occupation higher for compounds than for villa type housing.
- Land loss was common in urban and peri-urban villages, with few households receiving compensation
- Farming as a major occupation is less prevalent in urban and peri-urban villages
- Home gardens were more common in villa houses.

Appendix 11 Descriptions of the four study villages.

ABURASO

The village is reasonably well connected to Kumasi by a 18km long tarred road. During the Village Characterisation Survey, it was classified as a peri-urban village. The current population size is estimated at about 4000, dominated by indigenous tribes with few inhabitants from the northern and southern part of Ghana. Recent population increase is by both natural and migration. Over the last ten years, more and more migrants, especially those from the southern part of the country, have settled in Aburaso due to its proximity to Kumasi and availability of affordable accommodation (low rents and cheap housing plots).

Unfortunately, there is no information available about the history of the village. The village has a chief and a queen mother, of whom only the latter is a resident of the village. The chief pays regular monthly visits and on special occasions. The chief is supported by sub chiefs who together form a council of elders. They are the main decision making body in the village but also have adjudicative responsibilities. Aburaso falls under the Bosomtwi-Kwanwoma District Assembly. However, there is no assemblyman in the village. Although the traditional administration is not fully integrated into the District administration structure, it provides a viable channel for the initiation and implementation of developments.

According to the elders, farming was the main source of livelihood in the past, but this is gradually shifting towards non-NR based strategies as more and more people are seeking alternative livelihood strategies due to changes in land use. New professions emerging are traders, masons, carpenters, shoemakers and public servants. In addition, the nature of farming is changing, cash crops such as cocoa and oil palm are being dominated by food crop, especially cassava, and vegetable production due to excessive exploitation of forest resources. Currently, there is a big oil palm and cocoa plantation left at the southern border of the village. Livestock rearing such as poultry is done on a small scale, free range basis, but not of major economic importance.

Almost all elderly men and women are engaged in farming either in the village or have access to land outside the village boundaries such as the Ashanti and Brong Ahafo regions. Younger people prefer to be involved in vegetable production as it gives returns on a short term basis, especially for early maturing types of vegetables. To start market gardening, they can obtain financial assistance from customers (pre-financed) who will have the first right to buy their produce, which in some cases can have a negative impact on their decision-making power since the buyers have a complete monopoly over price controls.

Existing village facilities include a borehole, a pit latrine, electricity, a kindergarten, toilet, a clinic and a hospital (built by the Catholic Church). Although streams contribute to the village water supply, it is not adequate due to drying up. Developers have started to build into river courses and waterbeds causing drying up or reducing streambeds of watercourses (personal observation of research team). Besides a public pit latrine, villagers have built their private pit latrines, VIP or water closets both in the old town and the new residential area. All numbered houses are connected to electricity supply.

There is a daily market in the village with basic facilities where traders sell their produce on tabletops or on the ground. The refuse dumpsite is problematic. It used to be in the bush, but is now in the centre of a residential area due to recent housing developments. The chief and the council of elders are trying to relocate it at a greater distance from the built up area. Churches are well represented through large community buildings for worship. For facilities

lacking in the village, people rely on the neighbouring communities like Nzema that borders the Aburaso community.

The proximity to Kumasi has a profound influence on the social and economic lives of Aburaso's inhabitants. The major contributing factor is the good road network and improved transportation. At the moment, the community is served by a high number of taxis and trotros per day. The combination of improved transport and high demand for farm produce have boosted economic development of the village. In addition, an increasing number of civil servants have moved to Aburaso, which has led to a high demand for arable land for housing development. Increasingly, other areas of land, less suitable for construction, are being taken up for housing development, for example, land located in the valley bottom.

APATRAPA

Apatrapa is located within the Western area of Kumasi Metropolitan Area (KMA). It is about 11km from the centre of the city and about 0.5km off the Kumasi-Sunyani trunk road. The population is estimated about 6000, dominated by the indigenous inhabitants who form around 70% of the total population. The village is classified as urban according to the Village Characterisation Survey (VCS) report.

In the past, people were predominantly farmers, but this has gradually given way to other occupation such as trading, artisanship and construction work (unskilled labour). Currently, farming is the major occupation for less than half of the people. Data from the VCS revealed that almost all the lands at Apatrapa had been sold for housing development. Therefore, large scale food crop farming has been replaced by small-scale farming activities. Most farms are now located on temporary cultivated undeveloped housing plots. Farmers still operating on family lands, tend to have bigger portions of land for farming. Livestock is kept in small numbers at household level, mainly fowls, chicken and sheep.

Most of the farmers who are still in farming are carrying out their activities in other villages like Mankranso, or in other regions such as Brong Ahafo and the Western Regions of Ghana. Others have shifted the focus of their farming activities to vegetable farming with crops like tomatoes and garden eggs. There is also intensive sugarcane cultivation in the valley bottom to supply the distillery sited at the fore part of the community. There is a small area of fallow land that seems to belong to wealthy people. Compared to the other villages, Aburaso, Duase and Swedru, Apatrapa had the smallest area of land available for farming. As farmlands have been taken away for housing development, people have moved into other occupations such as trade, construction and skill-based occupations like mechanics, shoe making and factory workers. A large percentage of the youth are either casual labourers or unemployed.

The village is under a divisional chief and a queen mother who are both living outside the community. According to the VCS, there is no assemblyman but only a Unit Committee. There are no trade or market associations, but there are some active religious organisations in the community. Because there are no established market facilities, people have created their own markets along the main roadside.

Facilities in the community include a public cemetery, a community clinic (built by an NGO called Dorsatt Memorial), electricity, pipe borne water, schools, toilets, shops and licensed chemical shops. All numbered houses in the village are connected to the electricity grid, except the newly built houses and uncompleted buildings which are yet to be connected. In addition to public K-VIP toilets, people have constructed private toilets and WC's are available in some of the houses and the new buildings. The village is connected to the Ghana Water and Sewerage company pipe. Pollution of the water stream poses a problem

as it is being used by the distillery for distilling the local gin and by other people especially the vegetable farmers at the valley bottom. The village boundaries have expanded over the past years to border neighbouring communities, which has brought the advantage of access to their amenities and infrastructures as well. Access to education services for the increased number of school going children seems sufficient, given the number of Kindergarten, primary and junior secondary schools.

Although the close proximity to Kumasi has opened op new opportunities in terms of intensive vegetable production and non-NR based livelihood strategies, it has also had a detrimental affect on some of the inhabitants, bringing problems such as economic hardship, food shortages, crowded living conditions, landlessness, unemployment, high cost of living, dampened communal spirit, teenage pregnancies and to some extent, general insecurity. Indicators of the urban influence are the high number of kiosk operators (highest of all 4 case study villages), highest number of residential civil servants and construction workers and a high number of daily commuters to Kumasi.

DUASE

The people of Duase originally migrated from Denkyira Wiawso during the reign of the Asantehene I in the seventeenth century. They first settled at Dedesua behind the Oda river in Ejisu in the Ashanti region. After the Asantehene married one of the women settlers, he moved with her to the present location, Duase together with the fetish. Asantehene created a stool for their children in the village. Later other members of the settlers at Dedesua moved to join those at Duase. Eventually, subsequent chiefs settled their wives there and started giving the land out to various families. This resulted in four major families in the village: Atwia; Abrade; Akusiase; and Akwete – each with their sub-chief. Currently the village is under four different sub-chiefs who are fighting for control of the village lands that has resulted in serious land litigation that has hampered any socio-economic development in Duase.

Duase village, located about 6km along one of the tarred roads from Kumasi, was characterised as a peri-urban village during the VCS. The village land use is divided into built-up areas of houses, churches and infrastructure, surrounded by farmlands, fallow land, a sacred grove, a teak plantation (4 acres) and a cemetery. In total, there are about 82 numbered houses, 5 unnumbered and 2 uncompleted houses. The low number of unnumbered and uncompleted houses indicate the slow pace of development or expansion in the village, and therefore demand for housing is higher than supply. Environmental concern is caused by an industrial quarry in the neighbourhood with side effects like cracks in buildings, and air pollution (dust). Further, the Kumasi Metropolitan Assembly dumps all the refuse from the city into part of this village, resulting in air and water pollution (of Sisa, the main stream in the village).

Population increase is mainly through natural growth as the in- and out migration rates are balanced. Migrants have moved to the village because of the low rents for accommodation whereas the indigenous population moving out are mainly farmers in search of farmlands in other regions such as Brong Ahafo and the Western Regions. Others, especially the young, have moved out to find non-agricultural jobs in the cities and outside the country.

Originally, the main occupation of the people was farming, but currently about 50% of the inhabitants use farming as a second occupation. Farmland is still available in Duase, more than in Apatrapa and Aburaso but less than in Swedru. Livestock is kept on a small-scale but there is also a commercial poultry farm in the village. There has been a shift in types of crops cultivated. Compared to the other villages, Duase has the most intensive valley bottom farming with crops like lettuce, cabbages, garden eggs and tomatoes. There is also an

intensive production of sugarcane and taro mostly done by migrants from the north. Another important crop is cassava. It is interesting to note the unusually high number of backyard farming activities compared to other villages.

Duase is serviced with piped water, boreholes, electricity (numbered houses only), two public K-VIP toilets (a third one is under construction) and has primary schools and a junior secondary school. However, the village does not have any health services, and communication services are restricted to individuals but mobiles are taken over quickly. There is also no formal market place, but people operate kiosks and set up tables along the roadside for sale of provisions and foodstuffs.

Inhabitants depend on Kumasi for health services and for employment opportunities. Transport has improved considerably over the years, and many commercial vehicles ply the route between Kumasi and beyond the village, making several trips a day. According to key informants, about 500 people commute on daily basis to the city to undertake their income generating activities and shopping. Those engaged in trade and construction work mainly work in Kumasi and nearby villages. The village also serves as a dormitory village for public servants who take advantage of the low rents and work in Kumasi. Food crop and vegetable farmers mainly sell their produce in Kumasi. The shoe making and carving work done by the youth are sold in Kumasi thus offering a market for the agricultural and non-agricultural activities in the village.

SWEDRU

Swedru was founded about the same time as Duase when members from the Asene Clan in Kumasi migrated from Amakom during the reign of the Asantahene Nana Osei Tutu 1. A group of 3 hunters and 4 women on a hunting expedition first lived at Antoa (Kwabre District) in the Ashanti Region before settling down at Swedru. During the VCS, Swedru was characterised as a rural village. Current population is estimated at about 1500, including 501 as registered voters according to the voters' register of 1995**.** Migrants who form less than 10% of Swedru's population, originate mainly from the north. In total, there are 59 numbered houses, 15 unnumbered and 8 uncompleted houses. These new and uncompleted houses represent the major changes in the village in recent times. The village is under a divisional chief but does not have a substantive queen mother. The sub-chief is supported by a council of elders made up of 5 sub-chiefs who represent the different 5 clans in the village. The degree of community organisation is quite high compared to the other case study villages as there are various organisations in the village such as the Unit Committee, a traders association, religious organisations, political parties and Nnoboa groups (Labour groups).

Farming is the predominant major occupation in the village with about 75% of the men and 90% women into full time farming**.** More than 90% of total farmers have farms in the village, and the rest have farms in the neighbouring villages. Only a minority of 20% of men and 10% of women are involved in non-agricultural activities such as trading and food processing. Vegetable production has become the major commercial agricultural activity in the village, which is to some extent threatened by two sand and stone winning sites in the village exploited by outsiders with permission from the District Assembly. Other important cash crops are tree crops like oil palm and cocoa. The difference with Duase, the other case study village that has a significant share of its inhabitants involved in farming, is that there is no valley bottom and backyard farming. A few farmers combine crop farming with small scale free range poultry and livestock (sheep and pigs). Of all 4 case villages, Swedru has the largest area available as farmland, followed by Duase, Aburaso and Apatrapa.

Village facilities consist of 3 bore holes, (one is out of use)[48], 1 kindergarten, 1 primary school, 1 junior secondary school, 1 public pit latrine with two compartments, a sacred protected grove and few churches. However, there are no market facilities, no electricity, no communication systems, no health posts, and no post office and the villagers rely on the nearest town for such services. In addition to the boreholes, water is collected from 5 streams encircling the village (4 are seasonal that dry up during the dry season). The community is rather active in undertaken communal activities, examples are:

- Construction of the JSS workshop, sponsored by the District Assembly Common fund, community has to provide labour and local materials.
- 2 K-VIP toilets funded by monetary contribution of C400 per adult, and communal labour.

Improved infrastructure and a public transport service have increased the urban influence on the socio-economic life of the villagers. Improved access to Kumasi appears to have initiated a shift from the predominantly food crop farming system towards increased vegetable production. Traders commute from the city to the farm gates to purchase vegetables like tomatoes, okra, chilli and garden eggs. In addition, a few farmers, especially women, have taken on petty trading and take their produces to the city themselves to sell for better prices than at the farm gates. During the agricultural lean season, the youth seek alternative employment and commute to Kumasi to engage in income generating activities such as petty trading and casual labour (e.g. head loading). However, the number of people involved in non-farm livelihood strategies is rather low compared to the other 3 case study villages, of which Apatrapa shows the highest proportion followed by Duase, Aburaso and Swedru.

[48] An annual levy of 1,200 cedis is charged to all adults for the use and maintenance of the bore holes.