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# ANNEX A

## R8491

### RESEARCH REPORT

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### List of acronyms used in this document

BAIF	Bharatiya Agro Industries Foundation
BYN	Boafo Ye Na (Who can Help the Peri-urban Poor?)
CEDEP	Centre for the Development of People (NGO in Kumasi Ghana)
DFID	Department for International Development (UK Government)
EKW	East Kolkata Wetlands
FTR	Final Technical Report
HD (H-D)	Hubli-Dharwad
IDS	India Development Service
IGAs	Income Generating Activities
K	Kumasi
KPUI	Kumasi Peri-urban Interface (Ghana)
MOVE	Market Orientated Value Enhancement
NR(s)	Natural Resources
NGO	Non Governmental Organisation
NRSP	Natural Resources Systems Programme
PAP	Participatory Action Plan (Planning)
PU	Peri-Urban
PUI(s)	Peri-Urban Interface(s)
SHGs	Self Help Groups

## 1. INTRODUCTION

As the balance of world-wide population distribution shifts towards urban areas there has been a renewal of interest in urban-rural linkages. Yet this has done little to draw attention to the actual meeting of urban and rural activities, a meeting that has been conceptualised as the peri-urban interface (PUI). Only recently have there been concerted attempts to systematically learn about peri-urban interfaces and disseminate the results, as is demonstrated by the fact that the collection of papers edited by McGregor, Simon and Thompson (2005) just published, with NRSP support is probably the first of its kind.

Research into the characteristics of peri-urban interfaces has been dominated by a continuous and in-depth examination financed by the NRSP from 1996 to 2006. Although more than 15 individual research projects were carried out, they all studied aspects of the peri-urban interfaces associated with only three urban places: Kumasi, Ghana, Hubli-Dharwad, India and Kolkata, India. These three investigations searched for knowledge about natural resource production systems affected by a PUI and the effects on the livelihoods of poor people engaged in these systems. This was followed by the initiation of participatory planning to propose alternative livelihoods, and finally the testing of some of these alternatives in pilot projects in Kumasi and Hubli Dharwad. Because it did not begin until 2001, the study of livelihoods in the East Kolkata Wetlands did not reach the point of executing pilot projects arising from its planning phase.

As cities expand, the surrounding peri-urban areas also move outwards. Thus, places and people that were peri-urban become urban and others that were rural become peri-urban. This means that ever increasing numbers of people are subject to the transformations brought by a peri-urban interface. Without moving their residence, these rural people are subsumed into urban life and the urban economy. They then play a role in the performance of urban areas as engines of economic and social development. There are both differences and similarities here with the general movement of rural people to cities and towns. Thus to learn about the way livelihoods and poverty are affected by a peri-urban interface would seem to illuminate, not only the possibilities for vast numbers of people who live close to cities and towns at any given moment, but also the opportunities and challenges for the masses who are continually migrating to urban places from greater distances. This lends an immense value to our knowledge of the peri-urban interface, and attaches an imperative to the extraction and synthesis of general learning that could not be produced by individual NRSP projects. They could not engage one another in reinforcing and contrasting their separate findings, especially from one city-region to another. This provided the basic reason why this synthesis of the discoveries of ten years had to be carried out. It furthered argued for extension of the project across the whole of the RNRRS program, if that were possible and seemed fruitful.

During its 11 years of existence the NRSP also supported a number of projects that commented upon the re-use of urban wastes. Although there was no initial design to investigate this specific activity and its potential, it was clear that a quantity of information had been gathered and analysed to some degree, but that it had never been integrated across projects. Realisation that seven separate projects might each have something original to say about using solid and liquid wastes from cities and towns for productive purposes argued for another synthesis study, albeit more speculative and of a very much smaller scale. Moreover, the convenient and efficient opportunity for reuse of the by-products of urban activities in the nearest rural production systems appeared to be capable of making a valuable contribution towards the overall synthesis of peri-urban knowledge.

Another initiative was spurred because trials by people of the Kumasi PUI of alternative livelihood activities came to an end in circumstances that left room for much more to be learned than had hitherto been drawn from them. The Kumasi team experienced unusual capacity limitations and a tendency for the attention of the team's research to be drawn to issues that were not directly linked to peri-urban interface livelihoods. The team had substantial difficulty favouring its research function over that of facilitating development in the villages of the pilot projects. It did not fully appreciate and act upon this shortcoming until the final year of the project, and at that point faced difficulties in obtaining sufficient commitments from the available researchers. It then allocated these limited resources of time to the investigation of five themes, of which only two dealt directly with knowledge of livelihoods of peri-urban poor people that could be drawn from the trials of productive activities. The situation called for a short program of additional research that would further analyse the available data in order to capture more understanding about livelihood alternatives and pro-poor possibilities in peri-urban interface conditions. This was particularly important where the findings could be compared or contrasted with those from Hubli-Dharwad, providing more opportunities for synthesis of NRSP supported research on peri-urban interfaces.

Although execution of each initiative was driven by its own imperative, the linkages of the synthesis of urban waste reuse knowledge and of the extraction of additional knowledge about the Kumasi PUI to the overall synthesis of PUI knowledge suggested and justified joint management of the three projects as one, in order to obtain efficiencies. Joint management enhanced the process of continuously integrating into the overall PUI synthesis any findings of the other two parts of the project.

## 2. METHODS

All three parts of this project drew upon the existing documentation produced by research projects, augmented to only a small degree by interviews with a few of the researchers involved. All were carried out as desk studies. Very different scales of resources were directed at each. At one extreme was the synthesis of urban waste reuse knowledge which was assigned three person-weeks. The synthesis of peri-urban interface knowledge stood at the other extreme, claiming over 6 person months.

Large questions loomed over two of the three fields of investigation, and there was a call for evidence that the third – the PUI synthesis – could actually add sufficient value to justify itself. The question facing a synthesis of urban waste reuse was simply that of there being sufficient information in the documents of a kind that might produce new knowledge, given that there has been so much study of urban waste management during the time of the NRSP. Two critical issues faced further studies of the data on the Kumasi peri-urban interface. There were rumours that base line data had been lost or corrupted. Moreover, there was no guarantee that essential cooperation and participation would be forthcoming from the former team members of the Kumasi PUI research team in Ghana.

Consequently, the combined project began with short surveys of each study area. These concluded that indeed there were many possibilities for substantial synthesis of new knowledge from the PUI projects and that, although much reported about the urban waste reuse was not now new, there were still possibilities for several important original conclusions. As for the Kumasi situation, the base line data was found to be adequate for the most interesting possibilities for further lessons from the trials of alternative livelihoods, and critical support was demonstrated by the institutions and individuals of the former research team. These results argued for continuation of all three parts of the project, a view that was accepted by NRSP management.

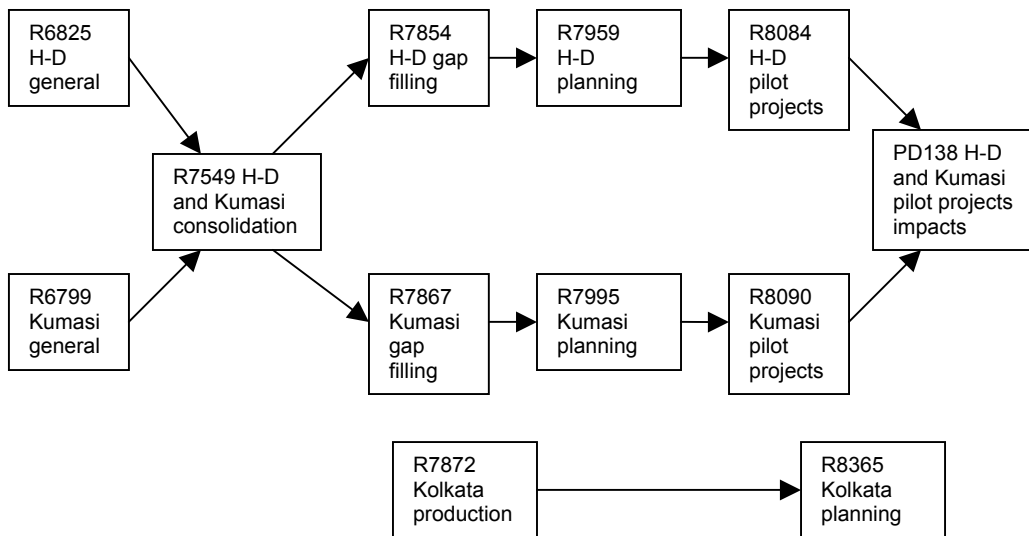
**2.1 The Synthesis of Peri-Urban Knowledge**

In 1999, the NRSP’s research to that date of the peri-urban interfaces of Kumasi and Hubli-Dharwad was consolidated. The findings were made into the book, sub-titled Tale of Two Cities, which was distributed to possible users in Karnataka, India, Kumasi, Ghana and in the UK. No other synthesis work was done on the NRSP’s PUI projects that followed. Nor was the earlier consolidation revisited in light of these subsequent projects. There has been no prior attempt to draw PUI-related findings from projects of other RNRRS research.

This synthesis focussed on production, livelihoods and poverty – three subjects that dominated NRSP research because of their acknowledged importance to DFID and to the development community in general. Although all of the peri-urban projects of the NRSP were reviewed, some had little or nothing to say about these matters and ultimately did not contribute to the synthesis. The principal sources were those shown in the diagram below.

Cross-cutting knowledge came from comparing, contrasting, and bringing together findings regarding 3 peri-urban interfaces that would otherwise remain unrelated, drawing mainly from the 12 projects in the diagram. Conclusions regarding the PUI were formulated that were not visible from the perspective of a single project, or that were more significant because they were reinforced by findings in more than one of the cases examined. Neither could be produced by the individual projects themselves. This was the value added by the synthesis: its identification of knowledge that might have meaning beyond the circumstances of a particular peri-urban interface.

**Diagram 1. Sources of the PUI Knowledge Synthesis**



This overall synthesis of PUI findings also attempted to draw upon projects of other RNRRS research. The approach chosen was to count upon the familiarity of the managers of other RNRRS programs with their own projects to direct this study to those documents that might possibly provide new knowledge about peri-urban production, livelihoods and poverty. This seemed compatible with the scale of resources and the time frame given by the NRSP management for the entire project of synthesis. Guidelines were given to those managers whose programs were most likely to contain relevant projects. These guidelines identified three basic questions for which the synthesis sought answers. Most of those to whom a request was made remained

silent, and this was taken as a message that they had no contribution to make. While one reply advised that no projects had relevant material, others provided lists of projects in which the peri-urban interface concept may have figured, without further guidance to matters of production systems and the associated livelihoods and poverty. The effort made with the most promising of these yielded meagre results for a great deal of searching, discouraging any further attempts.

Finally, the overall synthesis drew upon the findings of the other two parts of this project: that searching for further knowledge of the Kumasi PUI and that examining NRSP projects dealing with the reuse of urban wastes. Findings from each of these parts were relevant because they supported others that were identified by the overall synthesis (the additional Kumasi study was particularly valuable in this way), or because they were points of synthesis relevant to peri-urban circumstances (which was the focus of the urban waste reuse study).

From its onset, this synthesis project targeted DFID as the principal institution to take on board its findings. The Urban-Rural Change Team (URCT) was identified as a good point of entry for the delivery of findings. Accordingly, contact was established in the first month with the URCT and maintained throughout. A key act was to make the URCT aware of the subject of the project and its intended scope, and then to obtain from it an indication of issues or questions that would be of greatest use to its current and projected stream of work. Once identified, it was possible to focus the synthesis upon these issues and to return to the URCT with findings that threw light upon them. In a final meeting with URCT staff, after delivering in advance the summary of the synthesis findings that had been requested, the author of the final report was commissioned to follow up the project with further in order that briefing documents could be circulated within DFID to, among others, the livelihoods advisors of its country and regional desks. At the same time, a much shorter summary (Annex E of this Final Technical Report) was prepared responding to a request from elsewhere in DFID (which occurred after this NRSP peri-urban interface synthesis had been conceived) for a number of syntheses across the programs of the RNRRS. It is not clear how the briefing document edited from this summary will be used within DFID.

Secondary targets were identified among the international community of academics and development experts who have shown an interest in aspects of urban and rural linkages. For them, separate short policy briefing documents (which appear as Annexes G and H of this Final Technical Report) were prepared on each of about a dozen research messages. They received electronic versions of appropriate bundles of the briefing documents.

The full report of findings of each of the three parts of this project was placed in downloadable form upon a dedicated website, and all documentation of the project contains a reference to this site. A small number of hard copies of the final report were distributed to individuals who could be identified as possible heavy users of its findings. The full report appears as Annex B of this Final Technical Report.

The website serves a general audience, including academics and researchers. All major project documents containing findings of the project have been placed there. Journal articles are planned, but have not been prepared at the time of writing.

## **2.2 Additional Knowledge of the Kumasi Peri-Urban Interface**

The extraction of additional knowledge of the alternative livelihoods piloted among poor people affected by the peri-urban interface of Kumasi, Ghana was based upon the data obtained by R8090, using for reference where possible data on poverty, livelihoods and production obtained by R7330, Peri-urban natural resource management at the watershed level: Kumasi; R7854, Further knowledge of livelihoods affected by urban transition, Kumasi; R6799 Kumasi Natural Resource Management. This main source –

R8090 – was the final Kumasi PUI project. It engaged hundreds of peri-urban villagers in new or enhanced livelihood activities, in order to obtain knowledge about the possibilities for fighting the problems and grasping the opportunities created by Kumasi the city.

In addition to its own reports of findings, project R8090 had produced sets of base line data and a large quantity of process documentation covering its activities while organising interest in new livelihood activities, providing information and access to credit, and delivering training in certain productive skills. Extracting additional conclusions was a matter of further analysis of this information, which was carried out in Kumasi. Because the experiences of the R8090 team had demonstrated the difficulty of freeing Kumasi researchers from competing commitments, it was essential that this task be led by a full time researcher from outside. Given that an outsider would lack familiarity with project R8090 and its context, participation of a former member of that project's team was essential and, fortunately, was obtained. Several other team members were able to contribute regarding particular themes that arose during the course of the synthesis.

Aside from feeding these results into the overall synthesis of peri-urban knowledge, they were taken to several Ghanaian institutions that had expressed interest in more information following local presentations of findings by R8090. Visits were made to offices, a briefing note provided – which is Annex F of this Final Technical Report – and a discussion held around the briefing note and a power point presentation. A hard copy of the full report was later delivered to each of those who took part in these meetings.

For a general audience including academics and researchers, the full report was put on the website along with the briefing note and power point presentation. The full report is Annex C of this Final Technical Report. A journal article is being prepared at the time of this writing.

### **2.3 Synthesis of Urban Waste Reuse Knowledge**

Seven unrelated studies financed by the NRSP that featured the use of urban wastes were examined for commonalities and contrasts that could add new findings to the existing general body of knowledge. The search was especially for elements of urban waste utilisation relating to the livelihoods of peri-urban poor people. These were more likely to be without precedent. Moreover, they were likely to make a direct contribution to the overall synthesis of peri-urban knowledge.

After the initial rapid survey to establish if there was potential, closer study of the existing literature on urban waste reuse followed, in order to test the originality of the possibilities before they were fleshed out. This reduced the number of findings that promised to be new. In the end, it was possible not only to feed some of the findings into the overall synthesis of peri-urban interface knowledge, but also to include information from individual projects that illustrated how urban wastes both help and hinder peri-urban natural resource based production. A short briefing note – Annex H of this Final Technical Report – was prepared and delivered to a number of individuals known to be interested in either urban waste management or peri-urban natural resource based production. A journal article is being written. The full report is Annex D of this Final Technical Report.



### 3. FINDINGS OF THE SYNTHESIS OF PERI-URBAN INTERFACE KNOWLEDGE

The findings of the overall synthesis of peri-urban interface knowledge are the most wide ranging and important for their meaning in other situations than the three city-regions that were studied. These include contributions from further study of information obtained by the testing of livelihood alternatives in Kumasi (project R8090), where these could be usefully combined or contrasted with others from studies of Hubli-Dharwad and/or Kolkata. The synthesis of NRSP project findings on the re-use of urban wastes also made contributions to the overall synthesis. Nevertheless, there are separate reports on these two other components of this project which follow at the end of the following lengthy account of the substantial findings of the overall synthesis.

#### 3.1 About the peri-urban interface

Rapid urban growth no longer supports the traditional simplistic divide between 'urban' and 'rural' (Simon *et al* 2004). Consequently, the peri-urban concept attempts to move understanding beyond definitions considered solely in terms of geographical location and spatial land use. Rather it considers the PUI as the meeting of rural and urban activities – in effect a process rather than a place (Brook and Davila 2000). Although this is a less comfortable conceptualisation than one based on place, it attempts to categorise linkages and interactions between rural and urban areas “characterised by flows of produce, finance, labour and services and by change – economic, sociological, institutional and environmental” (Purushothaman and Purohit, 2002 p.8), giving a sense of the inherent dynamism and patchiness of the PUI. This means that the nature of the peri-urban interface is one of constant change leading to a variety of livelihood and natural resource problems specific to the PUI. Those living in such an area experience livelihood structures in constant transition and unless the effects of changes and flows as well as the spatial aspects of the PUI are taken into account the poor and very poor will continue to 'fall between the cracks' of policy typically divided between urban and rural in its perspective.

The University of Birmingham *et al* (1998a) identified the peri-urban space as the location of a high proportion of capital investment and new activity. This is where new industries and housing are established and where people affected by city centre development migrate. It is an area of intense rural-urban linkages with flows of labour and natural resources moving into the urban area and flows of people and waste moving outwards from the urban area.

However, the rate of change across the PUIs studied was not uniform and this heterogeneity was reflected in people's livelihood strategies. The livelihood strategies of poor people living within the PUIs studied were complex and sometimes contradictory with options open to people varying as a function of the specifics of development within a given area.

The synthesis studies explored the livelihood choices and strategies, the challenges and opportunities available to people living, working and migrating into the PUI. It considered the resources that poor people are able to marshal in order to avail themselves of the undoubted PUI opportunities, while coping with the challenges of dynamically changing circumstances. It further considered means by which productive change can be further engendered. These findings are summarised in the research messages box of this annex.

### Research messages

A PUI creates conditions that can offer opportunities for new productive activities with potential to generate more income than previously.

At the same time, PU conditions can adversely affect existing livelihoods. The negative impacts land disproportionately on women and poor people

Because the impacts of urbanisation affect locations differently, appropriate livelihood opportunities and constraints also vary spatially, yet without clear patterns.

PUI inhabitants are aware of the emerging urban opportunities but may need support to be able to understand and access them.

More productive farming techniques, improved crop varieties and expanded production of perishable farm products (such as vegetables, mushrooms or milk), novel animals (such as bees, grass cutters and snails), niche based manufacture (such as soap or incense making), or scaling up and diversifying existing activity (such as trading) are illustrations of income-generating activities that people may take up when a PUI impacts on them.

Interventions that lead to PUI people trying something new can improve livelihoods. There are actions and actors that interventions can support to this end.

The research showed how actions that:

- challenge changes in natural capital by rehabilitating natural resources,
  - change the financial capital context by promoting savings and improving access to credit for investment,
  - develop human capital by expanding information sources and providing training,
  - promote social and political capital by linking into wider institutional landscapes
  - develop community based action planning, community facilitators and more effective social networks,
- ...all support the move of poor peri-urban inhabitants into new productive activities.

People who took part in an activity supported by an intervention gained confidence and were encouraged to believe they could make positive livelihood change.

Actions that enhanced or rehabilitated natural resources gave more positive economic outcomes than any other livelihood options. Peri-urban agriculture remains an important livelihood activity. It offers opportunities for the production of high value, perishable products to urban consumers and environmental benefits as a consequence of managing urban wastes as an agricultural resource.

Traditional farming and trading activity forms a valuable bridging activity supporting people's moves into new productive income generating activities. These activities often have particular importance for women.

Fast returns on new activities are needed because fewer non-cash based alternative livelihood strands are available to PUI people.

People did better as individuals than in groups in terms of earning more income, possibly because peri-urban circumstances reduce social capital.

Efforts to involve local government institutions did not succeed, providing evidence that governments lack interest in PUI problems and opportunities.

### 3.2 Livelihood choices within the PUI

#### Key points

- A PUI alters the resources used for livelihoods, usually irrevocably. Sometimes this change is rapid. The negative impacts of PUI processes on livelihoods fall disproportionately upon women and poor people who had fewest of the livelihood assets needed to cope with these changes and who easily become more vulnerable as a consequence of PUI change.
- People developed a range of livelihood activities to form a multi-stranded, risk reducing livelihood portfolio that enabled them to cope with the challenges of living within a dynamic PUI. This was more marked for the poor than for non-poor or very

poor groups. Both income generating options and speed of livelihood change was greater in PU villages closest to the city.

- Farming and trading, usually in agricultural produce, were the most frequently mentioned income generating activities in all three PUIs. In the East Kolkata Wetlands (EKW) aquaculture was of specific importance. The poorest people remained most dependent on natural resource based activities.
- Where people were not engaged in farming or trading, casual, unskilled labouring in construction, agriculture and factories formed the basis of cash income generating activity for many poor people in the PUI. There was a trend away from natural resource based activity that was more pronounced closer to the city centre. The city was becoming increasingly important for people's livelihood activity. This change was most significant for men, with women and poorer people remaining most dependent on NR based livelihoods.
- The threats to non cash based livelihood activity as a consequence of urban change required poor people to further develop cash based livelihoods within an increasingly monetised economy.

### **3.2.1 Peri-urban livelihoods**

The synthesis analysis focuses mainly on income generating activities within the PU context, to seek answers to questions posed about economic activity and how labour markets work for the poor. Tacoli (1999) recognised that proximity to urban opportunity offered the potential to lift people from poverty. Off farm employment, changes in marketing opportunities and the availability of inputs for peri-urban production have been identified as the main factors likely to offer new livelihood opportunities to people living within the PUI (Brook and Davila 2000).

### **3.2.2 Cash and non cash based activity**

For the peri-urban poor, livelihood activities fell into two broad categories of cash based and non-cash based activity. Non-cash based activities such as household food production, fuel, fodder or medicinal herb collection or access to building or artisanal materials depended on free access to communal natural resources while the knowledge base for these traditional activities was handed down through the generations.

However, the meeting of urban and rural activities brings irreversible changes in access to natural resources. The poor tended to feel the adverse effects of PUI changes most as they lost natural resources to overexploitation, land to building and urban infrastructure, water became more polluted or dried up and supplies become more formal (e.g. R8084/ F: F10). Traditional hunting or gathering and certain agricultural or aquaculture livelihoods become less tenable as a consequence of natural resource depletion and urban planning restrictions. At the same time, household food security can become threatened by loss of the land needed for food production. The loss of natural resources on which non-cash livelihood activity is based pushes people into greater dependence on a monetised economy.

### **3.2.3 Income sources**

Cash based income generating activities –tended to be in agriculture, business, trade or casual employment across a range of sectors. People worked either as employees or self employed (but typically a mixture of both). There was a seasonal component to some types of income generating activity which poor people found difficult to manage and which led to consumption based borrowing in the form of advanced wage or profit taking (Gregory 2003; Working Paper 5 2002:15).

Occupations fell into primary or tertiary sectors<sup>1</sup> with almost no manufacturing other than small scale artisanal production (e.g. carpentry, textiles, shoe making, leaf plate making). In both Hubli-Dharwad and Kumasi PUIs certain traditionally produced items (e.g. leaf plates, pottery, woven grass goods, woodcarving and shoes) were becoming uneconomic in the face of global competition and the increasing availability of cheaper or more convenient alternative materials (R8090 and R8084) although some items that met niche market or traditional cultural needs were still being successfully produced and even expanded (e.g. alata soap or agarbatti incense sticks). There was some large scale, agricultural, added value activity in both Hubli-Dharwad and Kumasi (Brook and Davila 2000 & 7549). Otherwise value added production was small and a specifically female sector e.g. cooked food production (R7854/ G).

In Kumasi, unemployment was recorded as a livelihood feature of the poor (R7549: 183), with 55% of PU dwellers suffering periods of unemployment (Kasanga 1998). High youth unemployment was reported even for those with an education. Remittances were an important source of income for some classes of people in Kumasi, helped by liberalisation of foreign exchange controls (Brook and Davila 2000: 33). The importance of remittances was briefly mentioned in Hubli-Dharwad (Gregory 2003) and Kolkata (R7872/C), but no detailed data was collected.

The East Kolkata Wetlands are a unique and interesting human and ecological system demonstrating some peri-urban features. The livelihoods data generated from the EKW wetlands research was limited to people working within the waste water agricultural, horticultural and fishpond systems specific to the EKW where an estimated 50,000 fishing, horticultural agricultural and ancillary jobs are supported by the use of urban sewage wastes. However, these livelihoods shared similar constraints of seasonality on casual employment, low wages leading to diversity of livelihood strategies and mixed employed and self-employed livelihood strands while traditional livelihoods were under similar pressures for change as a consequence of urban pressures on the peri-urban environment.

#### **3.2.4 Wage based employment for poor socio-economic groups in the PUI**

Secure, salaried work opportunities were extremely scarce for poor and very poor people who lacked education and skills (R7854/H: H11; Gregory *et al* 2004). Nonetheless, there was a marked increase in the availability of non-farm employment. Cash based employment for poor people was typically short term, casual, seasonal, 'by day' work requiring few skills.

Non agricultural labouring work was available in factories, sawmills, construction, quarrying, brick making, sand winning and menial domestic services. Agricultural labouring was very poorly paid despite competition for labour apparently driving agricultural wage levels upwards but was easily accessible to the poor who had traditionally learned skills (R7549:147; R8090/BiB:33). Men living in districts closest to the city were most likely to take advantage of city based labouring opportunities (Blake *et al* 1997b). The very poorest households had fewer workers (2%) involved in the better paid labouring activities. This may have been due to age, higher levels of health problems and disability in these groups that precluded physical labour as an occupation (Hillyer *et al* 2001).

#### **3.2.5 Self employment for poor socio-economic groups in the PUI**

Self-employment opportunities arose from agriculture, trading, service provision and artisanal activity. Outside of agriculture, self-employment revolved around selling services or skills or becoming involved with markets and trading. Examples of self employed activities reported in Hubli-Dharwad and Kumasi include dressmaking or

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<sup>1</sup> Primary production - agriculture and quarrying; secondary production – manufacturing; tertiary sector - service industries (Barrett *et al* 2001).

tailoring, ancillary skills required by the building and construction industry such as plumbing, electrician, welding or general service provision such as driving or providing transport. A further potential income stream particular to the PUI is recycling of urban waste. For example, in the East Kolkata Wetlands 'economic ecosystem', wastewater-based agricultural, horticultural and fishpond systems are central to livelihood strategies. An estimated 50,000 fishing, horticultural and agricultural jobs are supported by the use of urban sewage wastes. (Kundu *et al* 2005). A diverse range of ancillary occupations also revolve around the fish and vegetable production and marketing. These activities include security provision, harvesting work, produce packing and transport auctioneers, traders, retailers, fish seed raisers, boat builders, net makers and labour engaged in maintenance of the wastewater systems (New Agriculturalist 2002).

Self-employment links people flexibly into the informal economy and allows, or perhaps demands, that people develop diverse income generating opportunities. Some occupations were noted to be easier to combine than others.

### **3.2.6 Agricultural labour**

Agricultural livelihoods included both paid and unpaid agricultural labour in addition to farm ownership and receipt of the usufruct benefits from the land. Paid labourers might be people who were landless or those who had access to land but who also needed to generate further cash income by selling their labour (Gregory 2003). Family members, especially women and children, provided unpaid farm labour at home. In general, agricultural wages were low, with women earning less than men. In Kolkata, women were less likely to undertake paid work unless adverse family circumstances required them to work for others (Working paper 5 2002). However, where workers were organised they were able to negotiate higher wage rates (R7867/FTR: 27 & Annex B, table 14). Low agricultural wages were encouraging a move out of agriculture and into other labouring opportunities afforded by proximity to the city. This was particularly so for men and younger people (R8090/Bi B and PD138). The rising costs of labour disproportionately affected female farmers in Kumasi because they were the people most likely to be employing agricultural labour (Aberra and King 2005).

### **3.2.7 Gender and age dimensions to income generating activity**

Female access to the most productive income generating activities was more restricted than for men. Most significantly, the movement to off farm activity, especially paid employment, was more pronounced for men and access to the more lucrative agricultural and trading activities was more restricted for women. The choice of livelihood activities were often predetermined by gendered perceptions of what was socially or culturally appropriate work. Consequently, women's income generating activity was frequently limited to the least production opportunities. For instance, the occupations most associated with poverty in Kumasi (staple food production, trading and cooked food selling) were mainly undertaken older women (R7854/ G: G37). In Hubli Dharwad, paid work for women was predominantly poorly paid agricultural labour reflecting women's lack of alternative opportunity especially in the more rural villages (R6825/ Vol 1 pii) while women's' work opportunities appeared to be most restricted in the Kolkata PUI being limited to the lowest paid and least secure activities. Domestic duties also made it more difficult to work in the city constraining many women to income generating activities located close to home (Hillyer *et al* 2001 & Working Paper 5, 2002).

However, despite the limitations placed on them, women in the EKW undertook a variety of work activities (Mukherjee *et al* 2002) even though information, resources and training to diversify livelihoods were notably difficult for women to access (R7872/C: 40). This demonstrates women's resilience and supports the idea that women are amply able to take advantage of peri-urban opportunity despite disproportionate constraints placed on their activity.

Furthermore, Ambrose-Oji (2005) (R8084/ E: E18) pointed out that changes in labour supply and demand was of growing importance for women in the PUI with mounting labour constraints affording them more flexibility in their choice of labour market.

### Figure 1 Commonly reported occupations of poor people in three peri-urban areas

#### Most common occupations of poor and very poor groups in HD

Type of Activity	Poor and very poor groups (n=114) % of total
Agricultural labour	36.8
Agricultural Production	10.5
Dairy production	5.3
Commercial labour	9.6
Construction labour	6.1
Brick/Quarry labour	8.8
Artisan	6.1
Trading	5.3

Source: Data from R7867/Annex B Section 4.2/Table 6)

#### Most frequently reported occupations in Kumasi

Type of Activity	All groups (n= 2051) % of total
Farmer	41.7
Trader	19.8
Tailor	6.4
Artisan	5.9
Driver	3.6
Chop bar	3.0

Source: Data from R7854/G Table 10

#### Poor groups present in PU Kolkata

Occupation	Poverty rank
Casual workers (no regular income)	1
Rag Pickers	2
Scavengers/ cleaners	3
Fishermen's wives	4
Landless labourers	5
Sex workers	6
Transport workers (rickshaw pullers)	7.5
Vegetable vendors	7.5
Agricultural workers	9
Fisheries workers	10

Source: R7872/ Annex A Symposium paper: 2

*(Section 2 of the full report – Annex B – gives greater detail about livelihood choices within the PUI)*

### 3.2.8 Processes driving peri-urban livelihood change

A peri-urban interface (PUI) produces special circumstances for production, livelihoods and poverty. People did not seek change and tradition and familiarity were powerful forces for stasis. Nonetheless, within the PUI change could be rapid, for example when common property land in Kumasi was sold without consultation with the users and without replacement by alternative economic activities (Simon *et al* 2004). The processes of urbanisation influencing livelihood change appear to push people from a rural economy into an urban economy. This increases the requirement for cash income

and reduces the livelihood security inherent in strategies based on access to common pool resources.

Destruction of natural resources tends to take the form of loss of land and forest to urban development. It may also be the loss of soil fertility due to extraction of construction materials, opportunistic farming practises driven by insecurity of tenure or by an inability to afford fertiliser, and soil and water pollution originating from the city. Farmland is in demand for urban housing, commercial development and public infrastructure. Damage to and loss of the natural resource base disproportionately affects the poorest people (*considered further in the land and landlessness section (constraints and barriers section 3) of full report at Annex B*). Typically, the poor lose common property rights as a result of these processes along with other resource appropriators, but the benefits, where they exist, tend to accrue only to richer individuals. This in turn perpetuates and exacerbates structural inequalities. There is also evidence that degradation of the natural resource base pushes people who were not previously vulnerable into such a state. The result is considerable pressure for poor people to adopt non natural resource-based livelihoods.

Hillyer *et al* (2001: B29) showed people made more changes to their livelihoods in villages closer to the city in HD, suggesting greater opportunity for change exists in places closer to the city. Similarly, in K the rate of livelihood change was faster in villages nearer to the urban centre than in those further away (R7854/G: G5). In HD there was an observable difference between those who were confident about their abilities to make change and those who weren't. Where people felt confident, they were able to take advantage of peri urban opportunity and had the information sources to allow them to do this (Gregory 2003). For those able to manage change, the PUI offered greater choices of occupation, an expanding consumer base leading to greater opportunities for services and trade, better transport availability leading to greater market access and a competitive advantage of proximity for perishable agricultural products.

Typically, where people had given up income generating activities, these had been abandoned for better paid work, easier options or for health reasons.

### **3.2.9 Livelihood diversity as a response to PU change**

The peri-urban interface is not a fixed or homogenous area but a fragmented mosaic of changes. The level and rate of change is highly differentiated across the peri-urban interfaces studied and this heterogeneity is reflected in people's livelihood strategies. Hillyer *et al* (2001) showed livelihood diversity to be major coping strategy within the Hubli-Dharwad PUI. The diversity of occupational types recorded within the PUI was an indicator of the extent of choice of economic opportunities available to inhabitants.

The research confirms that peri-urban residents are faced with a variety of specific livelihood and resource problems and opportunities. Consequently, people's livelihoods undergo a sustained transition as they move from a rural base to an urban one. Peri-urban pressure on land availability, insecurity of work, small cash returns and low pay rates were prime determinants of poverty (*constraints and barriers section (3) of full report at Annex B gives more detail*) leaving vulnerable people needing multiple stranded livelihood portfolios in order to reduce their vulnerability to livelihood shocks and stresses.

**Figure 2. Livelihood diversity in peri-urban villages**

	Urban	Semi-urban	Rural
<b>Hubli-Dharwad, India</b>	<b>Near Villages</b>		<b>Far Villages</b>
Households with three or more income strands	33%		44%
Mean number of female income strands	1.1		2.1
<b>Kumasi, Ghana</b>	<b>Apatrapa</b>	<b>Duase</b>	<b>Swedru</b>
Households with three or more income strands	22.8%	17.1%	3.0%

Source: R8491, 2005

Unexpectedly, women in more urban villages in HD had a lower livelihood diversity than other poor groups either male or female and were less likely to be employed in the cash economy (Gregory *et al* 2004). This may be due to the reliance on agricultural labour for women in these villages (Hillyer *et al* 2001), and when this opportunity disappeared women became excluded from the job market. Whatever the reason, the consequence was that these women were more vulnerable to changes in their marital status and their households potentially more vulnerable due to reduced livelihood diversity. It further suggested that, even where diversity of choice was available, other factors could prevent people from accessing these opportunities.

### 3.2.10 Agricultural Livelihoods Within the PUI

#### Key points

- Agriculture remained a livelihood component for the majority of people living within the PUI. Despite the importance of agriculture, food security was compromised for a substantial proportion of poor peri-urban inhabitants. Tradition, security and generational skills were significant in the choice of farming as a livelihood option. The group most notably dependent on agriculture were female agricultural labourers in HD.
- A dichotomy of agricultural activity was developing as a consequence of PU pressure. Richer peri-urban farmers were moving to higher value enterprises. These were becoming more capital intensive (and potentially more polluting).
- Alternative labour options for men within the PUI had created a shortage of affordable agricultural labour. This offered increasing opportunity for women to take advantage of work as agricultural labourers. Agriculture and agricultural labour could be done in combination with other activities and close to home, which was especially important to women with domestic responsibilities. However, agricultural labour was very poorly paid especially for women.



- The importance of agriculture as a sole occupation fell with increasing proximity to the city as a result of pressure on land availability and the presence of alternative employment opportunities. As urbanisation changed land use, farming was gradually becoming a minor occupation, especially for those whose access to land was constrained by PU development or where farm prices reduced incomes to unsustainably low levels.
- Choice of crop depended on length of production cycle, proximity to the market, market price and demand and availability of land. A better variety of seeds was available in urban markets and could affect cultivar choices in the PU.
- Livestock keeping was not seen as a land based activity so was often accessible to the poorest groups of people. Even where animals were restrained from free ranging, people were often still able to manage animal keeping using zero grazing techniques and natural or agro forestry fodder. Dairying was a vibrant livelihood opportunity for the poor in HD.
- Urban wastes formed a specialist resource for agricultural production, with a second function of reducing urban pollution. Urban wastes in the form of human sewage were being used for fish farming in Kolkata and for vegetable growing in both Kolkata and HD. Intensive poultry waste was available for soil improvement in Kumasi and industrial waste in the form of sawdust could be used for mushroom growing. Solid wastes from Kolkata were used to improve soils in peri-urban vegetable cropping.

### 3.2.10.1 PU agricultural production and urban waste management

The reuse of liquid and solid municipal waste in peri-urban agriculture often contributes significantly to the management of waste in urban areas with potentially even greater benefits if this concept could be supported by, and incorporated into, formal waste management systems. However, the value of the link between peri-urban agricultural systems and the informal use of urban wastes is rarely made (Hofmann 2005).

In Hubli Dharwad the disposal of liquid sewage waste presents an obvious problem for municipal authorities while at the same time forming a valuable resource for vegetable crop farmers (R7867/FTR). In Kumasi, large quantities of municipal waste are transported to landfill sites or remain uncollected while sewage from the city gets dumped into the river because of the lack of a proper disposal system (Kindness 1999). Waste sawdust from industrial saw milling operations and poultry manure from the many intensive chicken farms are also often dumped in the river or burned as a means of disposal (R8090/FTR and R7549). The destruction of urban wastes that could be used for peri-urban agricultural production has particular resonance in Kumasi because traditional bush fallow techniques for maintaining soil fertility are no longer sustainable under PU conditions of land pressure (Holland *et al* 1996: 70, Brook and Davila 2000: 123).

By contrast, the reuse of sewage based nutrients has been central to the development of the East Kolkata Wetlands systems (R7872/C) with the systems that enable sewage use by the fisheries contributing a significant, indirect subsidy to urban waste disposal (R7872/C: 22). The main concentration of urban waste (garbage) farming known as the East Kolkata Wetlands (EKW) was designated a RAMSAR<sup>2</sup> site in August 2002 in recognition of its international importance as a wetland site (Kundu *et al* 2005). The action of water pumping into the fishponds underlines the fact that the EKW wetland system is manmade and its continued existence depends on a functioning fisheries

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<sup>2</sup> The RAMSAR Convention recognises and lists wetland sites of international importance. EKW is maintained as site no 1208 on the list held by the RAMSAR Bureau established under article 8 of the RAMSAR Convention (Kundu *et al* 2005)

system (R7872/C: 23). Thus, breakdown of the fisheries system would further encourage silting and drying of the fishponds and increase the likelihood of its loss to urban development.

*(Section 2 of the full report at Annex B gives more detail about agricultural livelihoods within the PUI)*

### 3.2.11 Trading and Markets Within the PUI

#### Key points

- Trading in urban markets was a key peri-urban opportunity and in all three PUIs selling and trading emerged as important activities especially where good peri-urban transport infrastructure was available. Trading formed an important income generating activity for poor women especially in Kumasi where it was a traditional female activity.
- The major trading activity in both HD and K was in agricultural produce. This was normally carried out by women in Kumasi and by men in HD and Kolkata. Non-food trading made up less of the trading activity was more capital intensive and more likely to be undertaken by men in both. Non-food trading generated higher returns, but food trading helped to meet basic household food needs.
- The scale of trading determined profitability; consequently hawking and small scale or petty trading was an indicator of poverty. Trading generated small returns but gave a reliable daily income. This pattern of need for constant daily returns to meet consumption needs reduced the possibility for reinvestment becoming a coping mechanism rather than a route out of poverty.
- Small agricultural producers were limited to local and village markets or direct selling while larger farmers, growing a wider variety of crops, were better placed to access wholesale, regional and national markets in both HD and K.
- Inadequate linkage of local agricultural markets (in HD) to wider national or international ones and inadequate market information (in both HD and K) led to production gluts and price variability, potentially discouraging poor farmers from diversifying into the higher value, high risk crops often cited as a key peri-urban opportunity. On-farm storage, access to credit and technical and market information were found essential to help farmers manage their marketing.
- An important opportunity for women in the Kumasi PUI was trading processed food. Adding value to food products by processing was an income generating opportunity making particular use of women's traditional skills with the secondary benefit of reducing seasonal agricultural surpluses. In HD moving food processing into the formal economy e.g. the mango pulping factory, reduced its potential as an income generating activity for women.

#### 3.2.11.1 Selling and trading

The growing population of the PUI created opportunities for traders by increasing market demand. Consequently, selling<sup>3</sup> and trading<sup>4</sup> emerged as key opportunities for all socio-economic groups. However, trading activity was complex and featured typical PUI flows of goods; i.e. rural production going into the city and manufactured or

<sup>3</sup> Selling is defined as sales of the products of primary or secondary sectoral production (sectors defined after Barrett *et al* 2001).

<sup>4</sup> Trading here is defined as buying products (wholesale) to sell at a retail profit.

processed goods that may be unavailable in rural or peri-urban areas being brought to more rural areas from the city. People sold their own produce, traded by buying wholesale to sell retail, or a mixture of both activities with some people or social groups becoming specialised commodity dealers. However, the outcome of trading activity varied between rich and poor and between genders. For instance, there was a qualitative difference between petty trading and hawking and large scale trading in Kumasi, with the former two activities being considered indicators of poverty and typically undertaken by women, while the latter category contained the richest village members, usually male household heads (Village Characterisation Study quoted in R7854/G: G6).

In all instances, profit must be generated by sourcing products at a cheaper rate, allowing the trader to sell at a higher price, with traders taking advantage of price differentials in the different areas to generate income. This may involve acquiring agricultural or locally produced consumer goods in more rural areas (such as leaf plates in Hubli-Dharwad and grass mats or shoes in Kumasi) and selling closer to the city. Alternatively, domestic goods such as salt, oils, detergent, or other foodstuffs may be purchased wholesale for retail sale (sometimes repacked into smaller packs) or consumer goods (such as bangles, combs, radios, matches, toothbrushes etc) may be traded into the more rural areas. Consumer goods could be factory made and/or imported (e.g. toothbrushes, bangles, and clothing) or locally produced by artisans (cloth, leaf plates, grass woven ware, woodcarving, shoes) or second hand (clothing in K) although traditionally produced consumer items (pottery, baskets, shoes, grass weaving and woodcarving) were often under pressure from commercially produced goods.

### **3.2.11.2 Who trades?**

The cultural differences between Hubli-Dharwad and Kumasi were more marked in selling and trading than in other livelihood activities. This was mainly due to the differing cultural expectations of women's roles. In Kumasi trading was seen as a female activity and petty trading and hawking were considered a characteristic of the female poor. In HD, fewer women lived by trading where women's livelihoods traditionally remained close to home. (R7867). Nonetheless some women were skilled traders. The following case study shows how poor people took advantage of their peri-urban position to engage in petty trading.

Within the K PUI, young men traded almost exclusively in non-food goods hawked over a wide area. Older men were only reported as sellers of their own produce. Older women traded in vegetables, agricultural produce and other uncooked foods, while young women were more likely to deal in cooked or processed foods adding value to them before trading e.g. sliced and packed fruit or iced water.

*(Section 2 of the full report in Annex B gives greater detail about trading and markets within the PUI)*

### **3.2.11.3 PUI market structures identified**

A wide range of market outlets are utilised including permanent shops and kiosks, temporary stalls, formally allocated market spaces, space in squatter markets, pavement or roadside locations, house to house hawking and street vending. Agricultural commodity sales also take place via specialised agricultural sales infrastructures. Although some description of agricultural markets has been offered by the research, there is still much that remains unknown about how markets operate within the PUI - in particular the relative contribution of the formal and informal market sectors to the incomes of the very poor, the division of marketing between social groups and how poor people access market information. The poor are often excluded from formal markets as a result of existing traditional social structures and the cost of renting space or otherwise complying with local regulations.

### 3.3 The constraints and barriers to livelihood change in the PUI

#### Key points

##### *Natural capital constraints*

- Loss of access to land was a major cause of negative impact on the livelihoods of the peri-urban poor. The cases studied reaffirmed that land use change and land value increases are defining characteristics of the PUI.
- Farmers rarely, if ever, received compensation for the loss of their land use rights that was commensurate with the value of the land for their livelihoods.
- Land and soil productivity was being lost due to extraction and quarrying of building materials to meet urban construction requirements.
- Lack of access to natural resources, especially land and forest, limited traditional self provision, moving people into a monetised economy. This could be considered a further defining characteristic of the PUI.
- Poor urban and peri-urban waste disposal methods polluted water and soils used by peri-urban populations. The nature and quality of urban waste was changing, with greater plastic and chemical use compromising traditional agricultural systems that utilise urban waste as a productive resource.

##### *Financial capital constraints*

- Low pay and/or small returns from business of farming, petty trading, and a low-waged casual urban and rural work left little scope for savings or investment for PUI residents. Lack of savings, secure work and property rights, small profits and low farm prices all acted to reduce access to formal credit sources.
- The need for credit to enable people to develop alternative income generating activities was more acute in the PUI because of the loss of access to the natural resources that maintained traditional livelihood activities. Lack of access to affordable credit was a significant barrier preventing people from taking advantage of new opportunities arising from urbanisation, expanding or diversifying existing businesses, developing sufficient scale to make traditional activities profitable or taking up new training options.
- Lack of market intelligence meant that small producers were not easily able to match supply with market demand while restricted access to large scale markets sometimes excluded or replaced small peri-urban suppliers. Less poor producers benefited most from existing market structures. With many people producing similar perishable products seasonally, glutted markets were a PUI feature, which was recognised by people as a problem but no solution was addressed.

##### *Social and political capital constraints*

- Migration and greater urban contact have eroded social capital and changed attitudes among peri-urban populations. Changes in community composition had altered traditional social structures and status. A reduction in community based action had affected natural resource protection. Changing social structures had restricted input into decision making and planning for the poorest community members.
- Geographically based boundaries between rural and urban administrations fragmented government interest and policy making, reaffirming another defining characteristic of the peri-urban interface.

*Human capital constraints*

- The advances in human capital needed to adjust to the changes brought about by urbanisation were harder for the poor to make. This was particularly so because the lack of education limited employment options, and women suffered discriminatory access to education and training.
- Cash based employment for peri-urban people without education or skills, was limited to poorly paid labouring in agriculture, factories, construction or quarrying. Women's access to off-farm opportunities was less than for men and was also culturally constrained.
- Traditional rural knowledge was insufficient to compete in a modern economy. Limited information sources reduced innovation and consequently the potential to move into new productive activities. Women had fewer information sources than men. Lack of technology and skills exacerbated inability to cope with natural difficulties such as drought.

**3.3.1 The nature of PU livelihood constraints and barriers to change**

There are reasons why it is difficult for peri-urban poor people to make advantageous livelihood change. An understanding of the nature of these constraints and how they are influenced by the distinctive circumstances of the peri-urban interface may help to determine the effectiveness of policy. The complexity of interaction between these factors can make written descriptions circular so the major livelihood threats are outlined in the diagram at Figure 3.

In general, the research showed that poor people living in the PUI felt the livelihood shocks and trends associated with urbanisation increased vulnerability, either for themselves personally or for others. The inhabitants of the Kumasi PUI were largely pessimistic about the future. An Esreso community member said:

*“More people are going to fall into the vulnerable bracket as a result of increasing loss of farmland and decreasing family support”* (R8090/Bi B: 23).

Similarly the HD research pointed out the high degree of fatalism of PUI inhabitants especially among the poor and very poor with people believing that change was beyond individual control (Thoday 2003; R8084/FTR 4-App4b: 13).

Although urbanisation offered new services and income generating opportunities, the development of benefits for one group of people frequently removed or damaged livelihoods for another group of people. Changing access to livelihood resources was a significant feature of the PUI. These changes affected age groups, wealth groups and genders differently and led to increasing vulnerability of those groups, especially the poor and women, who were least able to move into new productive sectors, were unable to scale up their activity to give economically viable returns, and/or were directed into low wage sectors of the agricultural economy because of lack of alternative opportunity.

Peri-urban poverty exhibited the characteristics of both rural and urban poverty. The rural element was linked to loss of natural resources while the urban elements were broader based and linked to the growing importance of inclusion within a monetised economy. Access to housing and services, work and business investment required the capacity to generate cash income or to access credit. The size and nature of the assets people controlled and the speed and type of the change they had to cope with determined whether the PUI was more of a threat than an opportunity for traditional livelihoods. Vulnerability derived from economic change and instability and people's capacity to adapt to this.

Complex migration patterns were changing traditional social structures and decision making fora, while fragmented planning and policy making structures often led to uninformed policy decisions that acted to remove resources from the peri-urban poor. Poor people lacked any control over the decision making processes that shaped their livelihoods. This was most obvious around the issue of natural capital. Destruction of natural resources took the form of land and forest lost to urban space demands, loss of soil fertility due to extraction of construction materials, opportunistic farming practises driven by insecurity of tenure, and soil and water pollution by urban wastes. The pressure of growing urban populations made natural capital in the form of land the most contested asset in the PUI. Farmland was in demand for housing, commercial development and public infrastructure. These competing demands imbued farmland with a growing cash value as well as an opportunity cost, encouraging land sales. Where the land was common property land it was becoming transferred from traditional rights usage into private ownership. Loss of land, or land rights was the major source of negative impacts for poor people in the PUI. Farmers rarely, if ever, received compensation for the loss of their land use rights that was commensurate with the value of the land for their livelihoods or that allowed the development of alternative livelihoods.

Clearly, transition into new productive activity was hardest for the poorest people already working against a background of multiple disadvantages, with the consequence that peri-urban change potentially deepened existing social inequality producing self-perpetuating vulnerability. Where people become marginalised it not only affects the individuals pushed into greater livelihood vulnerability but also ultimately impacts on the wider economic growth of the area.

In all three PUIs the political and institutional frameworks that might protect natural resources and relieve poverty were complex, fragmented and sometimes ineffective or corrupt (R7959/FTR: 10 & Brook and Davila 2000: 34). Furthermore, the institutional attitudes in both places were inclined to be paternalistic reflecting the hierarchical nature of existing social systems (R7959/FTR: 11 & Brook and Davila 2000: 35). Onibokun (1996: 168 quoted in Brook and Davila 2000: 34) proposed that in Anglophone West Africa:

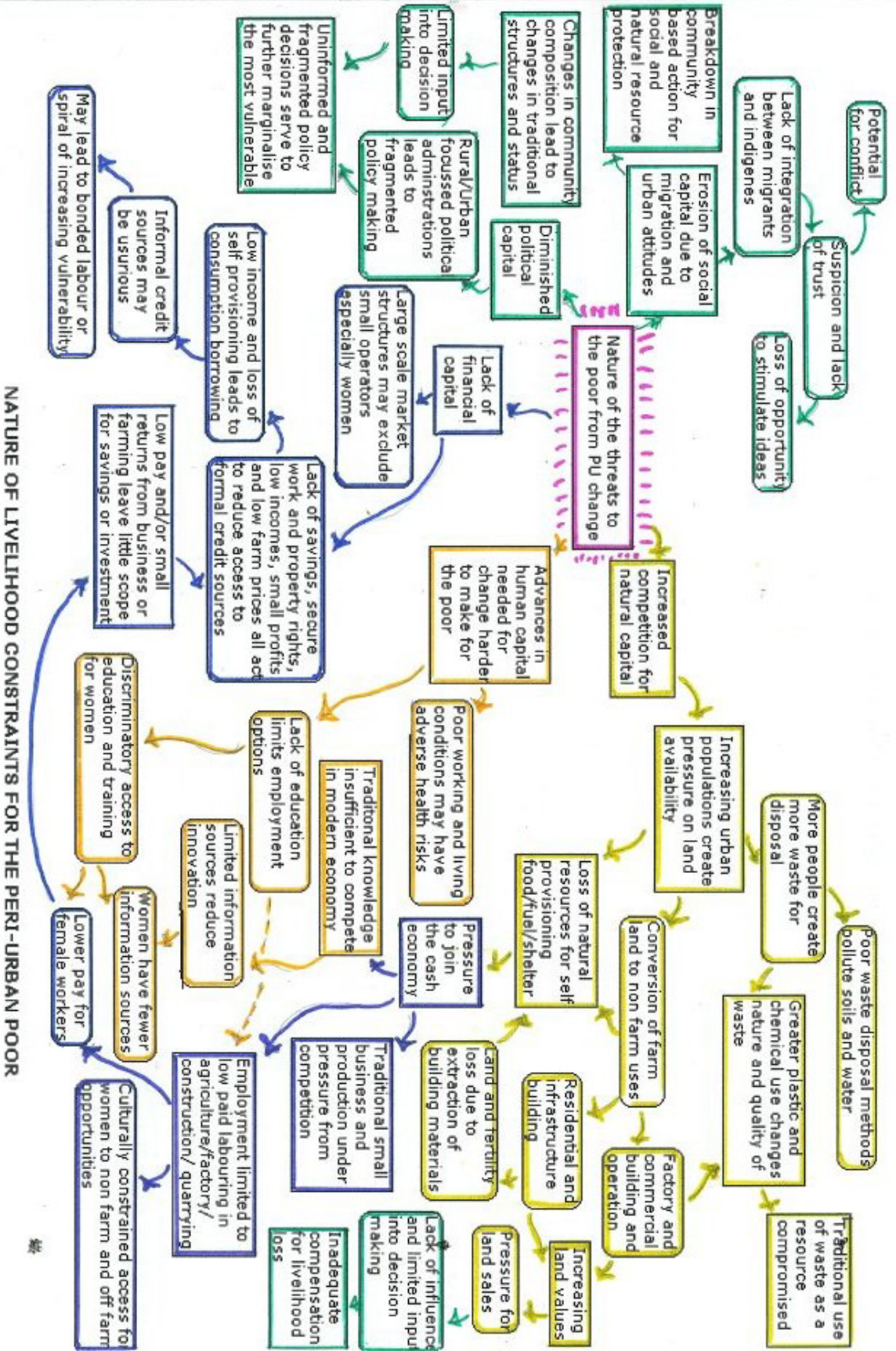
*“urban poverty is exacerbated by managerial incompetence, inefficiency, ineffectiveness and unresponsiveness. Lack of transparency, accountability and popular participation has combined to weaken the capacity of the state. Few states are able to face the challenges of urban growth effectively”*

A general lack of understanding about the PU concept was exemplified in India where BAIF reported that the training and political institutions in HD were:-

*“treating it (the PUI) as an urban area. They were of the opinion that the peri-urban effect is a natural process and it is beyond their ability to do anything in this area. Their involvement in the (project action) planning process has raised their interest in this issue”* (R7959/FTR: 16)

*(More detail about constraints and barriers to livelihood change in section (3) of full report, Annex B)*

Figure 3



### 3.4. Overcoming livelihood constraints

#### Key points

- Implementing a project intervention served to support people's moves into new or enhanced productive activity compared with those people or villages that did not participate. External facilitation by the NGOs increased the number of self-help groups in an area above what might have existed without this facilitation. Action planning gave an enhanced dimension to existing self-help group's activity.
- The project activities that appeared to most usefully help people to move into new productive activities were participatory action planning, self help groups, provision of credit, training and information, and facilitating the involvement of wider institutions.
- People involved in project activities improved their livelihoods and gained self-respect, confidence and increased status within their family and the community as a result of increased financial and human capital compared with people who were not involved in the project activities. Project participants became more confident in their ability to make livelihood change and to approach wider institutions, either individually or collectively, to get the services and support they needed to improve their lives and incomes.
- Both within and between projects, where the project activities focused on protecting and enhancing the natural resource base the effect on household incomes, savings, productive assets and food security was greater than where the natural resource focus remained extractive.
- The poor remained more dependent on natural resource use than the non poor after the project implementation even where the focus of the activities was to move people away from natural resource based livelihoods. Where the natural resources were enhanced a greater number of people gained a higher proportion of their productive activity from them. Where the natural resource base remained unprotected it continued to decline increasing vulnerability for the poorest people.
- Natural resources had to be protected by specific targeting. Activities designed solely to promote income generation or to reduce pressure on natural resources had no effect in preventing further erosion of natural resources.
- Individual working gave greater financial reward and greater household food security than group working. However, social capital, measured as unity, co-operation and empathy, increased more where community based initiatives had taken place. This helped to mitigate the effects of the loss of social capital arising from patterns of migration into the PUI and changing attitudes as a result of urbanisation.
- Traditional farming and trading activity formed a valuable bridging activity supporting people's moves into new productive income generating activities. These activities often had particular importance for women.
- The research showed that multiply disadvantaged people were able to carry out effective market analysis and business planning given adequate training and that lack of attention to these aspects limited the productiveness of people's income generating activity. Processing of PU agricultural production represented a significant area of value addition and trade already being undertaken by women.



In HD, this market area was also shown to be of interest to large scale commercial operators in way that could later threaten these small scale female livelihoods.

- Encouragement of potential for greater political capacity and economies of scale had been started by encouraging associations of self help groups but the activity of these self help associations had yet to be defined.

#### **3.4.1 Moving towards new productive activities**

If they are to remain productive in the face of urban changes and are to be able to take advantage of the undoubted opportunities that living in close proximity to cities brings, people living in the PUI need to have the capacity to move into new activities. The diversity of income generating activities found in the PUI indicates the extent of the potential, and that many people are already successfully taking advantage of the increasing array of opportunities. However, for the poorest and those made newly vulnerable by resource degradation and alienation from long-standing land-use rights – a disproportionate number of whom are women – breaking out of the poverty cycle can actually become more difficult. Because they have fewer of the livelihood assets needed to respond successfully to urban opportunities, they may need support in order to succeed. For instance, traditional rural knowledge and skills may be insufficient to compete in a modern economy. Limited information sources contribute to lower levels of business innovation and consequently adversely impact on capacity to take advantage of new opportunities. In particular, the research shows that women have fewer information sources than men, placing them at a further comparative disadvantage. The cycle is familiar: lack of wage opportunities, limited access to investment funds, poor levels of education, and declining access to natural resources restrict the ability of the poorest in a community to accumulate savings and consequently to invest in improving productivity and in expanding the scale of urban-oriented, income-generating activities. Consequently, these people are liable to become trapped in a cycle of 'peri-urban subsistence' that they cannot escape solely through use of their own resources. The problem lies not so much in a lack of awareness of the opportunities that exist, though a paucity of the practical skills needed to exploit those opportunities is often an issue; the primary blockage lies in a lack of access to more tangible assets. Breaking the cycle may require an external injection of resources through new or existing civil society institutions or state agencies.

#### **3.4.2 Alternative activities tested by action based research**

Trials of new livelihood activities during the research provided valuable information on what works, and which activities create future challenges for people in making the transition from rural to urban livelihoods. The research findings therefore serve as a valuable starting point for consideration of effective strategies for improvement in income generation capacity. In K, the potential for improving inputs to encourage higher value vegetable growing and farm crop diversification was explored mainly by the provision of credit by the NGO while a number of unfamiliar, natural resource based, activities (mushroom production, snail production, small animal production beekeeping and alata soap making) were introduced as micro business options and implemented through livelihoods groups (R7995/FTR: 5).

In HD organic farming, integrated pest management (IPM), improved crop varieties, WADI agro forestry, fruit tree growing, adoption of small livestock for income generation, promotion of better animal health and training village paravets formed the main thrust of the farming based programmes. Ancillary issues of improving soil fertility, catchment rehabilitation and providing irrigation were achieved using a variety of mechanisms that rehabilitated the natural resource base (*detailed and*

explained in R8084/ E: E2 Table 1). A significant factor was the provision of better information and training by the technical institutions and the facilitation of community based rehabilitation work by the grass roots NGOs. Some loans became available from the NGOs, which were most often used for the purchase of livestock for dairy production (R8084/ FTR). Income generating activities in HD that needed less natural resource based involvement included soap making, incense stick making, candle making, poultry and livestock rearing, roti and papad<sup>5</sup> making, pickle making, beekeeping, photo framing and tailoring. (PD138).

### A Training Intervention

Market Oriented Value Enhancement (MOVE) was conceived in response to the failure to find ways of helping the severely disadvantaged of the Hubli-Dharwad peri-urban interface, such as landless and illiterate women of low social status, for whom improved NR management meant little. The project was designed to investigate the potential of being able to select and adapt income generating activities to changing market conditions and recognising these new conditions by analysing the market on the basis of good market information. In this case, three self help groups of multiply disadvantaged women in Mugad village received intensive training in market analysis (Purushothaman *et al* 2004b). Discarding conventional approaches, Dr Subhas of the Institute of Management Studies at Karnataka University, Dharwad, designed a course to train the women to understand markets, prices, profits and the value addition chain. A new tool, Participatory Market Appraisal (PMA) was developed for illiterate people, which used symbols instead of script, and was used in house to house surveys of product requirements in Mugad. After much research, the groups opted to make laundry detergent. By the end of the two year programme they were making and selling 250 kg per month.

Community development officers of the NGOs on the research team attended the course and then replicated it in the other project villages. New enterprises were developed in all six villages within six months. In the end, none of the groups involved made a loss, every group chose to move forward in business, and all showed a new understanding and confidence about the market. Every group chose to trade, yet the strategies they have undertaken are diverse. The women from Mugad travel to a village together, but each one carries different products and goes to different areas. In Mandihal village, each individual takes a loan for any MOVE activity and keeps the profits. In Channapur what began as a group endeavour will evolve into the enterprise of one entrepreneur.

Adapted from R8084 FTR, Annex H

### 3.4.3 Action based research findings

The research shows that people can change their livelihood activities in ways that might benefit them and that they can be helped to do so. Research interventions that strengthened participatory planning, access to credit, the facilitation of community action, and the activities of NGOs served to promote innovative testing of livelihood changes and the uptake of novel livelihood activities by peri-urban dwellers. However, even though peri-urban pressures are eroding the value of traditional activities, these activities frequently serve as an essential economic 'bridge' supporting people's, or household's, moves into new livelihood activities. With better access to information about alternatives and about markets and with access to credit and encouragement to make savings, people will try new productive activities and/or substantially raise the scale of some current ones. With confidence gained from their involvement in project livelihood activities and the solidarity gained from groups and

<sup>5</sup> Cereal flour based food products

networks, they are more likely to seek help from institutions of government, financial services and civil society.

The research shows that developing a diverse range of crops was a strategy useful in helping people to better manage livelihood shocks. Rather more surprisingly, the research also shows that where natural resources are the focus of the intervention, they provide improved food security, greater income, increased livelihood diversity and are better protected and when compared with initiatives in which utilisation of the natural resource base remains purely extractive. In this scenario the natural resource base of the area continues to erode leaving the poorest peri-urban inhabitants increasingly vulnerable. The research also demonstrates that the number of food insecure households fell in areas where natural resource improvement was the focus of intervention, but remained the same where this focus was lacking. Where interventions introduce improved agricultural techniques and livestock husbandry, improve soil fertility and water management, encourage cropping diversity, promote tree planting, and offer natural resource management training the numbers of small farmers leaving the land or selling topsoil for construction fall, while incomes and food security improve. This challenges the assumption made by many actors and agencies that natural resource management is irrelevant to livelihoods that are becoming increasingly urbanised. In addition, the research shows the institutional frameworks that might protect natural resources to be complex, fragmented and lacking interest in, or knowledge of, the peri-urban areas.

The research indicates that individual activity is more effective than group action in terms of increasing incomes in both Hubli-Dharwad and Kumasi, possibly because peri-urban circumstances reduce social capital. People tended to express a preference for individual work, with a mushroom growers' group in Kumasi, for example, stating that *"the ideal number of people in a group is one"* (R8090/ Bi D). However, even when people are not comfortable working together in groups, they recognise (at least in principle) the value of developing networks and associations. The development of greater social capital can contribute significantly to a more enabling business environment, and one in which the poor have greater access to decision-making processes. This points to the importance of group action in more urban peri-urban areas, in spite of the associated difficulties.

Speed of cash return is noted to be one of most significant factors in the choice of livelihood activity for the poorest people as they generally do not have sufficient cash generating strands to their livelihoods, the savings, or the food self-sufficiency on which to depend while waiting for a new activity to produce returns, especially when this new activity demands loan repayments. The lack of livelihood resources available to the poorest people, especially women, effectively prevents them from taking a long term view leaving them most in need of sensitive intervention support in order to make change. The variability of the outcomes of activities for women exposed the challenge of ensuring female inclusion, with the implication from the research being that the outcome of the activity was more successful for women where their voices were heard. Nonetheless, the research amply demonstrated that multiply disadvantaged people were able to carry out effective market analysis and business planning given adequate training and that lack of attention to this market focussed aspect limited the productiveness of people's income generating activity. The research also established that social problems, such as alcoholism were sometimes considered so detrimental to livelihoods that the value placed on overcoming them superseded any economic development activities.

The research also showed that some additional actions might have further enabled people to move to new productive activity. The most important of these was the prior analysis of market opportunity including identifying the means to link small-scale production into market opportunities before engaging in livelihood projects. The detailed reasons why some project interventions were less successful for women needs to be further analysed. In addition the ideal balance of group and individual benefit could be further investigated.

The findings of the research projects about helping peri-urban people benefit from urbanisation can be usefully separated into two groups; those that were learned from trying alternatives and those that were learned from the research project interventions.

#### **3.4.3.1 What was learned from trying alternatives?**

The research showed that:

- trying alternatives gave some people benefit. All the alternative enterprises undertaken were profitable or were expected to become profitable with time and the number of people who considered themselves poor or very poor had fallen significantly compared with non project beneficiaries.
- for people with very low incomes to move into new productive activity speed of cash return was crucial. Where longer term payback was a feature of the new livelihood activity bridging activities needed to be available to help the poorest beneficiaries to manage the change period.
- the individual project activities revealed technical details about the problems and successes of the various alternative activities tried. These have not been analysed as part of the synthesis report because of their individual country application allowing few points of comparison.

#### **3.4.3.2 What was learned from the interventions of the research projects?**

##### *a) Effect of interventions on actions and actors*

The research showed that:

- intervention that supports the actors and actions identified can help, possibly because these actors and actions can overcome certain conditions that the PUI creates.
- where there was support for participatory planning among other supports, people did better with changing their livelihood activities.
- given the support of the intervention process, beneficiaries were willing to try new productive processes even where they were novel, meant taking unfamiliar risks, were not proven to lead to livelihood gain or the gain was not immediate.
- the effects of the projects were more variable for women than for men. Where there was a specific focus on women's needs women made similar livelihood gains to men. Where this was lacking women's circumstances did not improve as fast as those of men.

*b) Knowledge about actions that interventions might support that helped people make livelihood changes*

*i) Changing financial capital context*

Where self help groups had a savings and credit component poor people and women increased their savings. Consequently, savings rates increased in all social categories but especially for the poor and for women. This enabled them to move away from informal loans taken at high interest rates and increased the use of formal and SHG loans for production purposes. Informal debt repayment appeared to be a priority for the poor. Interestingly, men felt they needed greater financial capital for their activities than women and took larger loans.

The research indicated that income gains were more pronounced where people worked as individuals rather than in groups. Where credit became available people were able to initiate new activity or scale up the size or increase the diversity of their existing activity while support with business planning helped people to plan economically viable activity.

**Akosua's story**

Akosua was a 36 year old fruit seller living in the more urban village of Abrepo in Kumasi. Prior to joining Boafo Ye Na (BYN) project her low working capital limited the range and quantity of fruit she could buy so her profits were very low. After accessing a loan from the project she added lines of fruit that she did not previously sell as well as buying greater quantities of fruit. She now sells oranges, bananas, pineapples, watermelons and apples and has increased the scale of her activity.

Prior to the project she considered herself poor but now she considers herself average as a result of improvements to her income generating activity. She explained that her relationship with others had improved especially with her family because she no longer asked for money to pay her debts and was able to contribute to the household income and children's school fees. Her husband now consults her on family issues and she contributes to family decision making.

Source: PD138: 49 Box 5

*ii) Challenging changes in natural capital*

Where natural resources were the focus of protection, improvement or rehabilitation they provided improved livelihoods, greater income and food security and increased livelihood diversity than where utilisation of the NR base remained purely extractive. Where the NR base was not targeted for any positive action there was a continuing general reduction of natural capital and a further move away from natural resource based livelihood activity by all social groups but especially by those who were not poor.

*iii) Improving social integration and political capital*

The group activity that underpinned the intervention activities greatly enhanced social cohesion and significantly increased empathy, unity and co-operation were reported in project villages. However, conflict arose where groups were heterogeneous, where they were tackling unfamiliar livelihood options and where clear accountability and transparency was missing. Where groups managed their activity by community based evaluation they were better able to positively direct the management of the activity than where that evaluation was externally applied by others. The project noted difficulties in forming groups in some villages.

Where communities, networks and groups were able to make links with wider institutions this initiated the development of a more enabling business environment that also included the poor. Financial institutions became aware of the value of having entry points into communities provided by the community facilitators and self help groups. People could potentially gain greater social and political capital and economies of scale by joining together into networks of self help groups.

Where people fully participated in the intervention activities they became more confident in their abilities and felt better able to manage the process of change. Increased confidence helped people to approach external agencies, including NGOs, financial service providers, training agencies and political institutions, to request better services or suitable sources of help and they were better able to define how that help should be provided.

#### *Linking with wider institutions*

Competing interest for peri-urban resources requires sensitive input from planning and policymaking frameworks. Changes of boundary designation between rural and urban could result in the changes in levels of political influence or service provision. Participatory action planning processes carried out by the research indicated the range and complexity of the stakeholders and their variable and partisan understanding of the issues in question. Facilitating engagement of varying stakeholders to enable integration of the discussion between stakeholders using action planning methodology demonstrated that it was possible to develop and implement practical solutions to livelihood constraints. Concrete examples of practical success helped to engage the interest of wider government institutions although the HD research noted that government interaction was most useful either at a very local level or at the highest state level. The projects endeavoured to serve as a bridge to engage the interest of government officials, opinion formers and policy makers and to provide a two way channel for communication of information (R7959/FTR: 10). Where the projects succeeded in engaging political interest it made officials more aware of the suffering of the poor.

#### *iv) Advances in human capital*

Where people were given training it resulted in income gains. However, men were more likely to benefit from the training than women, which was probably a result of the nature of the activities taken up by the beneficiaries.

Nonetheless, expanding people's information sources encouraged people to investigate a variety of new ideas. The support provided by interventions and actions frequently acted to advance people's confidence and self respect. People became aware that it was possible to make change in their lives where previously many poor people had felt change was not possible. Zubaidah's story demonstrates how her human, social and political capital developed as a consequence of being involved in the project in HD.

## Case study of women's empowerment

### Zubaidah's story

Zubaidah was a Muslim bangle vendor in HD who made her living by walking from village to village selling bangles. She had 5 children and her dream was to raise them well and give them a proper education. However, she was very much under her husband's control.

When her neighbour formed a Sangha (self help group) for savings and credit activities she joined. Her husband would not agree for her to go to the meetings so she attended secretly when her husband was not at home. When her husband arrived home early one day he found Zubaidah at the Sangha meeting and she was badly beaten.

However, she continued to subscribe her savings although she stopped attending the meetings. Later Zubaidah's husband was badly in need of a loan but was reluctant to use the moneylender who charged 10% interest monthly. He eventually got a loan through his wife's Sangha at a minimal interest rate and became ashamed of his previous behaviour.

After that Zubaidah became an active member of the MOVE project. Her bangle selling had made her widely known and she was very popular for her attitude towards the Muslim community. In the last 20 years no-one had been elected as a Gram Panchayat member from her community. Her Sangha members asked her to compete for the position but she was hesitant as she was illiterate and had many responsibilities. Men asked her husband to compete but he said he 'could not squeeze anyone's hand so well as his wife does' and it was better that she compete. Finally the community nominated her, the whole village decided to elect her and she is now a Gram Panchayat member.

Source: PD138: 32

*c) Knowledge about interventions that supports actors and actions to help PUI people make changes in their livelihood activities.*

Where, because of a peri-urban interface, the following conditions arise:

- The increasing proximity of a city or town changes the way land is used, who can benefit from the use of land, and the productive processes that people can take up, resulting in physical, economic and social changes that are largely irreversible and which constitute a major break with the past.
- Tradition and familiarity are powerful forces for stasis and people do not seek change. PU processes create irresistible pressure for change, requiring people to assess unfamiliar risks or gain new skills in order to benefit from new opportunity. Many people have been previously immersed in rural economic activities, rural environment and rural social structures, resulting in limited knowledge of urban threats and opportunities.
- In-migration brings social, physical and economic changes creating further breaks with tradition and resulting in loss of group action and group support for individuals.
- Urban pressures lead to an increasingly monetised economy where livelihoods are cash based and subject to greater competition and the effects of globalisation. This results in pressure to move into cash based income generating activities on a larger scale than previously experienced and the further need to take national and international market conditions into account,

...interventions that include supporting the following actors and actions seem to help people to move to new livelihood activities:

- Participatory action planning that promotes group action, increases confidence to deal with the change being experienced, and increases flows of information at a local level, especially about urban threats and opportunities
- Community based facilitators, who provide information about urban threats and opportunities, promote participation in group action and facilitate links between local and wider institutions.
- Non-governmental organisations that can initiate and facilitate participatory action planning, provide information about urban threats and opportunities directly and through community based facilitators, and accumulate institutional knowledge about intervening in order to support changes in livelihood activities.
- Access to financial credit can facilitate moves to alternative livelihoods by those who lack financial capital or who had previously been able to practice productive activities that required very little or no financial capital.
- Access to training, information and other mechanisms for developing human capital to support the successful establishment of new, expanded or diversified livelihoods.

*(Described in more detail in section 4 of full report Annex B: overcoming constraints and barriers to livelihood change)*

#### **4. FINDINGS OF ADDITIONAL KNOWLEDGE OF LIVELIHOODS IN THE KUMASI PERI URBAN INTERFACE**

After analysing the broader research themes, this additional investigation of the Kumasi peri-urban interface was narrowed down to five topics as a strategy for achieving greater depth of understanding. These topics were crop farming by peri-urban people, trading by them, the gender dimension of livelihood choices, the influence of location and space on livelihood activities, and the impact of livelihood activities. The complete report of this additional study of Kumasi is Annex C of this Final Technical Report.

Key points

##### **4.1 On crop farming**

- Crop farming may be threatened by urbanisation but it remained a key source of income for Kumasi PUI inhabitants either as a main or supplementary source of income.
- Crop farming seemed to serve as a safety net to buffer shocks in livelihood activities with long gestation periods such as non-farm natural resource based activities.
- The more a peri-urban community was urbanised, the less there was of crop farming.
- Despite widespread loss of agricultural land due to urbanisation, Kumasi PUI farmers managed to access land through a variety of ways.
- The availability of land, length of production cycle and marketing opportunities determined farmer's choice of crops.
- Farmers tended to produce those crops that were in greater demand, thus cultivating similar crops and causing seasonal gluts and market fluctuations.
- Vegetables, both traditional and exotic, were ideal in several respects and thus more widely cultivated than traditional food crops.
- Traditional crop cultivation remained important.
- Outstanding debt was lower amongst farmers in more urban locations compared to those in rural parts of the Kumasi PUI.



- Farmers cultivating vegetables had lower outstanding debt than traditional crop cultivators.
- Men were more dominant in vegetable cultivation.

#### **4.2 On petty trading**

- Trading played a significant role in the livelihoods of Kumasi PUI inhabitants either as a main or supplementary source of income.
- The intensity of trading increased with greater urbanisation of the community.
- Women dominated trading owing to traditional gender roles associating this activity with them.
- Start up capital requirements, costs and availability of goods, market demand and space requirements determined choice of goods traded.
- Much of the goods traded were food items, both cooked and uncooked, with the later being more widespread.
- Trading non-food items had a potentially higher profit margin as indicated by the lower outstanding debt amongst those selling non-food items compared to those selling food items.
- The bulk of the food items sold within the KUMASI PUI were derived from traditional food crops, showing how trading remains dependent on traditional food crop cultivation.
- Given the decline in farming activities within the KPUI, traders obtained their supplies from either urban retailers or rural producers.
- Most KUMASI PUI traders sold their goods within peri-urban markets.
- Access to appropriate trading spots was a concern for traders, especially in more urbanised communities where the activity was more widespread and competition for space more intense.

#### **4.3 On impact of gender on the adoption of livelihood activities**

- Gender roles are critical in determining men and women's participation in livelihood activities within the Kumasi PUI. For instance, women dominate trading activities whilst more men participated in non-farm natural resource based livelihood activities.
- More women reported increased income as a benefit from participating in livelihood activities supported by the project which could possibly relate to their dominance of trading.
- Women had higher mean percentage outstanding debt than men which could possibly be associated with their responsibilities for household provisioning.
- Men requested higher start up capital than women indicating that they are not interested in small-scale livelihood activities.

#### **4.4 On the influence of location and space on livelihood activities**

- The adoption of livelihood activities was differentiated across the Kumasi peri-urban continuum. Most of those who adopted crop farming lived in rural locations whilst trading was adopted throughout the continuum, although more intensively in urban locations.
- The outcomes generated by livelihood activities also varied according to location within the peri-urban continuum.
- In contrast, individuals in intermediate parts of the Kumasi PUI were worse off than those in both urban and rural locations in terms of outstanding debt and expected length of dependency on credit.
- Access to adequate space for production and storage affected the success of non-farm natural resource based livelihood activities.

#### **4.5 On the impact of livelihood activities**

- Relative to those engaged in other livelihood activities, those in farming and petty trading reported more positive change in terms of the profitability of their livelihood activities and increases in their income.
- However, exposure to new technology and the availability of more spare time were identified as benefits by those who adopted non-farm natural resource based activities.
- Loan recipients who did not adopt new livelihood activities identified the injection of capital into their existing livelihood activities as a benefit.

### **5. FINDINGS OF THE SYNTHESIS ON URBAN WASTE REUSE**

The key conclusion of this synthesis is that the re-use of urban wastes by poor peri-urban people in order to sustain their livelihoods rarely, if ever, figures in the waste management thinking of cities or towns. The synthesis brings together new details of how poor people re-use urban wastes and supports assertions in the literature that the opportunities to re-use urban wastes are not easily exploited by poor peri-urban people and further that these opportunities are becoming increasingly difficult to exploit.

In the main this is due to the changing nature of urban wastes, the deterioration of the quality of wastes that threatens traditional PU waste usage systems and the lack of coherent strategies for municipal waste management by local authorities. Municipal waste management strategies need to take the value of waste as a productive livelihood resource into account and to appreciate the secondary environmental benefits that can be gained from implementing well-informed municipal waste management planning. In a number of instances, such information relating to the PUIs of Hubli-Dharwad, Kumasi and Kolkata was incorporated into discussions of peri-urban natural resource based production and associated livelihoods as they appeared in the overall synthesis of PUI knowledge.

However, closer study of literature has found that the scope for original conclusions has been reduced by the outputs of other research conducted after that supported by the NRSP. Some of these conclusions, in fact, are strengthened by citations to the work of NRSP researchers.

The full report of this synthesis of urban waste reuse knowledge drawn from NRSP projects is Annex D of this Final Technical Report.

### **6. CONCLUSION**

The findings of the three parts of the project – brought together in the peri-urban interface synthesis – have meaning to all those trying to understand and deal with rural to urban migration, urban development, and, in general, the roles of urban and rural economic and social linkages in development. This information is unique. It is about circumstances that are profoundly affecting the lives of an unknown, but certainly very large, number of people now. Whatever this quantity is, it is certainly increasing as cities expand their physical, social and economic boundaries.

The other two parts of this project produced findings that have meaning outside their contributions to the peri-urban synthesis. On the one hand, Government officers and NGO personnel in Ghana have already shown an interest in the 10 years of peri-

urban studies relating to Kumasi. Collaborating departments of the Kwame Nkrumah University of Science and Technology are incorporating the research into their teaching. The project has given all of them additional findings that speak directly to their interests in fighting poverty and improving production. On the other hand, from the short study of urban waste reuse comes a clear message of substantial importance when pro-poor or environmental policy is formulated.

Using the knowledge of produced by the three parts of this project, and further learning that builds upon it, policy regarding development in and around Kumasi and other Ghanaian cities, policy determining urban waste management, and, most significantly, policy addressing urban and rural development world-wide can be better informed, raising the possibility that it will become more effective. In particular, there seems to be little recognition in either urban or rural policy that peri-urban conditions and consequences can be distinctive, requiring attention and understanding that is also distinctive. Many of the possibilities for the project's findings to relate importantly to policy are outlined in the following pages.

### **6.1 Policy implications arising from three PUI synthesis studies**

The policy implications resulting from the findings of the three synthesis studies are important in helping to inform a wider understanding of the nature of poverty in a context of rapid urbanisation. The transition of existing populations from rural to urban lifestyles and the increasing pressures on urban development brought about by migration from rural to urban areas demands sensitive planning based on well-informed public policies if the advantages deriving from growing urban economies are to be translated into positive livelihood outcomes for many of the poorer people resident in peri-urban areas. The move from traditional, rural, often non-cash based, livelihood activities to a more monetised economy described by the synthesis reports has implications, for natural resource management, environmental planning and economic development policies. The dynamically changing circumstances of a growing urban area necessarily alter the livelihoods of many of the people living within that area. It is therefore possible to conclude that, because some people are made poorer by the rural to urban transition to which they are subjected and because people may be presented with new, perhaps unfamiliar, income generating opportunities, there is reason to help them to manage this transition. There are interventions that can provide this help. Ultimately, if policies and actions exist that can help the rural poor to enter the urban economy with less poverty than would otherwise occur, then these policies and actions would probably benefit from being informed by these synthesis findings.

#### **a) Urban poverty and gender**

The research clearly showed that the changes occurring to the livelihood resources of the poorest people were affected by dynamic changes occurring at the peri-urban interface. It further showed that the negative effects of these changes impacted more heavily on the poorest people and especially on women whose multiple disadvantages showed them least able to gain from the benefits of urbanisation and most likely to lose resources to the demands of urban development. In effect, unplanned rural to urban livelihood transition at the peri-urban interface maintains, and even promotes, existing structural inequality and consequently may deepen vulnerability and extreme poverty. Increasing numbers of people living in squalid and impoverished peri-urban conditions and the potential for peri-urban pressures to exclude them from mainstream economic growth represents, not simply a life of personal poverty, but a brake on the present and future economic development of a given urban area. There are interventions that can help to mitigate these deleterious livelihood changes but to be effective the natural, financial, social, political and

human capital constraints to livelihood change prevailing in a given area need to be understood by policy makers.

Here it should also be noted that the research noted that the particular effects of urbanisation on women's livelihoods plus the variability of effectiveness when implementing alternative livelihood activities for women, indicate that particular care is needed to ensure women's inclusion when formulating policy. The dynamism of the PUI and the heterogeneity of the opportunities and threats that lie within it, imply that a fine grained knowledge of a given area that takes existing infrastructure and opportunities that pertain to a given area into account is required before broader policies can be directed towards economic development. This is especially important within the informal sector where most of the economic activity of the poorest peri-urban groups takes place.

#### b) Land

The dynamic changes that occur as a consequence of urban development have the potential to promote the transfer of livelihood resources from the poorest members of community to the richer members. This is especially true of the issues surrounding the changing distribution of land where land tenure is based on traditional or customary rights or where land ownership is not a feature of the livelihoods of the poorest but where a significant proportion of livelihood activity is land based (e.g. in PU Kolkata). The immense change in the economic value of land resulting from the competitive demand for peri-urban land increases both rental and capital value of land and changes the balance of power between different categories of land users. Under these circumstances traditional decision making systems may break down and the resulting changes impact most on those who are least able to resist them. The lack of consultation between the land users, decision makers, developers and planners reflected the powerlessness of certain categories of land users and leads directly into discussions of governance and the capacity of the poorest people to become engaged in decision making even where the issues under debate directly affect their economic wellbeing. Thus effective policymaking needs to be underpinned by an understanding of the impact that land management decisions can have on the livelihoods of poor people even where they are not directly owners of the land. The so-called 'de Soto commission' (UN High Level Commission on the Legal Empowerment of the Poor) will start working in early 2006, and it is very likely that peri-urban land issues will not be covered in detail.

#### c) Environmental issues and natural resource management

The synthesis studies indicated strongly that natural resource based activities remained an important component of livelihood activity for peri-urban people and that this was the most significant for the poorest people, especially women who had fewer alternative livelihood options available to them. Rather surprisingly, support for positively directed natural resource management activities was shown to be one of the most effective measures to help the poorest people improve their income generating ability, even while there is a continuous decline in the natural resources available. However, interestingly, the research also appeared to indicate an assumption, made at all levels of decision making, that positive natural resource management was of little relevance to urban livelihoods.

The synthesis findings on waste reuse within the PUI described the double advantage of reducing problems arising from urban waste disposal while at the same time encouraging the use of a variety of urban waste products in an economically beneficial way. In addition, in the EKW, traditional methods of solid and liquid human sewage disposal formed the basis of a unique wetland ecosystem cited as an

example of best practise<sup>6</sup> and protected as site of international special scientific interest under the RAMSAR convention (Kundu *et al* 2005 and see footnote 3). However, since this research was carried out, new priorities have emerged encompassing the need to counterbalance waste use with containment of environmental and health hazards, requiring decisions about whose responsibility it is to do this. The information gained from this research only touched on these areas so has little to add to the current debates in this regard but does add a further indication of the need to feed an informed understanding of peri-urban waste disposal issues into planning and policy making debates.

#### d) Governance

The issue of governance is of fundamental and continuing importance. The many ways that declared local governments lack of interest in PUI issues were noted in the research. However, a significant finding of the research was the way in which people were willing to join together into networks of interested groups for specific ends such as accessing market opportunity or developing community based action. This networking activity could be promoted and facilitated at policy level. The action planning dimension of the research indicated that this aspect, while sometimes falling prey to more powerful sectional interests, still allowed poor people to better engage in decision making, to develop new confidence in their capacity to make positive livelihood change and to have the courage to try and engage the interest of significant others in order to help them to make this change. Practical achievements deriving from successful activities assisted in gaining greater interest from financial institutions and the engagement of political interest in the suffering of the poor.

#### 6.1.1 Policy Implications of Peri-Urban Interface Knowledge

- Because there are substantial negative aspects of a PUI that fall most heavily on poor people and women, because the poorest continue to be dependent on NR based production, because trading is the most frequent way that people begin to take advantage of the nearby urban economy, and because some aspects of PUI livelihoods are significantly different from those in either a rural or an urban economy, policy to deal with economic growth, labour markets, livelihoods and governance will need to be tailored to PUI circumstances if it is to be effective, and it will need the involvement of both urban and rural actors.
- Because some people are made poorer by the PUI transition to which they are subjected and some are presented with new income generating opportunities, there is reason to help them.
- Because ever-larger number of people are affected by a PUI as city sizes and economies grow, and because urban poor people from rural origins can be a drag on the productivity of cities and towns in their recognised roles as engines of development, seizing the opportunities and fighting the negative impacts of the rural to urban transition may deliver more rural poor into the urban economy with more assets, rendering them more able to be productive.
- Moreover, because poor people and women seem to be disadvantaged most by a PUI, if there is to be a commitment to reduce poverty, there is reason to take on their problems and opportunities arising from a PUI.

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<sup>6</sup> UN Habitat's Best Practises Database

- Because the PUI is both heterogeneous and dynamic, attention to the detail of opportunity and threats in particular locations needs to be considered for a fine grained understanding of PU livelihoods.
- To be effective, policy to support changes in livelihoods among PUI people will have to understand and address these natural, financial, social, political, and human capital constraints on making such changes.
- There are interventions that can help peri-urban people change livelihoods to their benefit. Although PUI people may already aware of PUI effects, those in government and in NGOs who could intervene to help do not seem to have the same appreciation. It can be difficult to bring these actors to an understanding of the distinctions of a peri-urban situation. Support for certain actors and actions, among others, seem to help make interventions effective.
- Those livelihood activities tried suggest what might work or give problems, providing a starting point for thinking or for discussions with possible users.
- Since group action underpins so much development activity, the difficulties noted in forming groups in some PU areas suggest a need for a greater understanding of the consequences of peri-urban change on group based action.
- There is a place for good NR management in policy affecting the livelihoods of PUI people. It is still useful to support NR based activities, even though land for these is being reduced. Agriculture can still be a beneficial activity, and helpful support can be given to it.
- There appeared to be a paradigm assumption that people would move from farm to non farm income generating activity as part of the urbanisation process and that as a consequence natural resources have no role in urban income generation. However, the research underlines the importance of natural resources to PU inhabitants. The process of urbanisation may change the NR usage of individual inhabitants over time, but for others who find themselves inhabiting a newly developing PUI created as a consequence of continuing urban expansion, ongoing positive management of natural resources needs to be considered when planning urban growth.
- If policies and actions can help rural poor enter the urban economy with less poverty than would otherwise occur, then these policies and actions would probably benefit from being informed about the peculiar aspects of a PUI. To obtain these benefits, DFID and other development agencies probably need to make their staff aware of the effects of a PUI on production, livelihoods and poverty, markets, and governance because it is very unlikely that they realise what happens at a PUI and what can be done in response. This knowledge is not yet in the body of development literature. The NRSP research underlying the findings of this project is unique.

In sum, it is possible to conclude that, because some people are made poorer by the rural to urban transition to which they are subjected and some are presented with new income generating opportunities, there is reason to help them. There are interventions that can provide help. Surprisingly, support for good natural resource management is one of them, even though there is a continuous decline in the natural resources available. Ultimately, if there exist policies and actions that can help rural poor enter the urban economy with less poverty than would otherwise occur, then

these policies and actions would probably benefit from being informed by the findings of this project about peri-urban production, livelihoods, and poverty.

### **6.1.2 Policy Implications of Additional Knowledge of the Kumasi Peri-Urban Interface**

- There are a number of lessons for policy makers and development practitioners. The findings show that Kumasi's peri-urban livelihoods have distinctive features that can inform the design and implementation of pro-poor policy in Ghana, both rural and urban.
- When introducing livelihood activities within the KPUI, location can be important. Trading appears more appropriate for more urbanised communities of the KPUI whilst farming is better suited to less urbanised parts of the KPUI.
- Livelihood activities that do not generate income regularly from the start are especially unlikely to work for peri-urban poor people.
- Vegetable cultivation has a high potential for generating income for poor households in the KPUI. However, they will require financial support to overcome some of the barriers of entry such as the high cost of seeds and pesticides.
- It is important to recognise that traditional gender roles still determine the choice and adoption of livelihood activities within the KPUI. (e.g. women's dominance in trading and men's reluctance to participate in this activity).
- In the light of the decline in subsistence production within the KPUI, it may be important to support activities that make direct contributions to household consumption, such as crop farming and trade of food items.

Thus, knowledge of distinctive features of peri-urban livelihoods near to Kumasi may be essential for the design and implementation of better pro-poor policy in Ghana. Good examples are that trading appears more appropriate new livelihood for more urbanised communities of the KPUI whilst farming is better suited to less urbanised parts, livelihood activities that do not generate income regularly from the start are especially unlikely to work for peri-urban poor people, vegetable cultivation has a high potential for generating income for poor households, traditional gender roles still determine the choice and adoption of livelihood activities, and it may be important to support activities that make direct contributions to household consumption, such as crop farming and trade of food items.

### **6.1.3 Policy Implications of Knowledge of Urban Waste Reuse**

Management strategies can make it easier or harder for peri-urban people to obtain urban wastes and benefit from their application in NR based production. Policy makers who are aware of the ways that wastes are used in a PUI, of the unexploited potentials for waste re-use, and of changes in waste qualities that affect such re-use can know if their decisions are harming or helping peri-urban poor people.

## **6.2 Lessons for this Type of Assignment**

From the project experience, several useful lessons can be drawn about conducting a synthesis study. The first of these is that preliminary studies are worth doing. Both parts of the project given to synthesis were subject to major questions, the greatest of these being: was there new knowledge of significance and substance to be obtained by examining together the findings of studies carried out without a planned relationship among them? Even the third aspect of the project – further study of

Kumasi peri-urban information – was under question because it had been rumoured that critical base line data was seriously flawed.

Scoping studies carried out in the first few weeks served to identify a number of synthesis themes of potential importance sufficient to justify continuation of two parts of the project. Inspection of quantitative data in Kumasi and examination of documented evidence during this time also confirmed that there was adequate basis for undertaking further analysis. Without these assurances, it would have made poor sense to embark upon full studies when there were such great risks that their fundamental purposes could not be achieved. Moreover, these preliminary explorations of possibilities tentatively established the priorities around which synthesis and further research would take place, informing a reassessment and firming of the project's work plan.

The risk of an unproductive study is, of course, particularly great when a synthesis is sought of various lines of research that were never structured to support comparability. At times, it seemed that arranging from the outset the collection of comparable data and the examination of the same questions would have been a better guarantee to success. In that regard, it was surprising just how much could be synthesised about production, poverty, and livelihoods from the NRSP peri-urban research in three locations, each with different personnel and their own choices of research issues. This may have been the result of good fortune or of very hard work by the synthesisers, and may not be easily replicated. Nevertheless, the experience showed that it is possible – and necessary – to creatively expand an initial brief in order to capture value from material with obscure potential. Moreover, there are advantages in doing so. It is impossible to imagine that a vision could have been formed 10 years ago identifying as priority issues most of those that this synthesis found it could usefully and importantly address. Not only might a well constructed set of comparisons chosen at that time have yielded unexciting findings in the end. The focus on them might well have stifled valuable explorations into the unforeseen in response to opportunities and interests that emerged during the decade of study.

A final lesson should be noted. An attempt was made to extend this synthesis, originally conceived for NRSP research, to cover all RNRRS research of the peri-urban interface. Given that it was quite limited in time and other resources, a careful survey of all other RNRRS PUI projects would have been prohibitively costly. Moreover, as discussed above, the potential for making crosscutting findings about production, poverty and livelihoods was entirely unknown. Consequently, a strategy was followed that called for the managers of those other RNRRS programs with potential to identify projects within their portfolios that were highly likely to have produced relevant findings. To aid them, this request was not made until a list of priority themes for synthesis could be shown to them. The strategy was not effective. Sufficient interest in the PUI synthesis could not be generated among the program managers to bring about the program overview and assessment that was sought. Perhaps this interest could have been achieved with more time and staff resources. Alternatively, perhaps participation by these managers much earlier – in this case, before this synthesis project was conceived – in the design of a synthesis cutting through all RNRRS research would have been successful.



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