

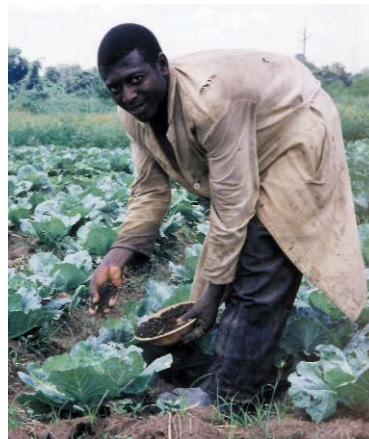
Living in the shadow of a city

Everyone in the developing world knows that there is wealth in the towns and cities and the result has been the relentless urban drift over the past 30 years and more. But can the cities continue to absorb people as they currently do and what problems does this create? Traditionally, poverty has always been thought of as a rural phenomenon but now it is an urban one as well with over half the world's poor living in cities. As the activities of urban areas come into contact with those of their rural surroundings, an interface is created with distinct features that affect natural resources and the livelihoods of those who depend on them. Change is the nature of this interface. Livelihoods cease to be entirely based on rural activities and begin to incorporate opportunities for non-farm income sources. Farmlands, grazing areas, and forests are managed differently to supply urban markets for building land, for foods and for energy, while pollution and wastes and labour demands in the city alter the ways that rural life works. While this is a source of gain for some, including those urban poor who may find affordable housing outside the built-up area of a city, it can also be a threat to others by bringing greater poverty to those who were once beyond the reach of the city.

IN KUMASI, GHANA

In 1997 a research project was set up to examine the effects of the growth of Kumasi in Ghana on the natural resource production systems at the interface between urban and rural communities. The initial aim was to improve production in the face of urban pressures but this was redirected to aim at

improving the livelihoods of the poor through better management of natural resources. The effects of urbanisation on the control and access to those resources became a focus. The impact on agriculture was a key issue and linked to this was the potential for using organic wastes to improve soil fertility. The role that modern satellite data and geographical information systems could play in helping to improve and speed up the planning and decision making processes was also examined.



THE PROBLEM AREAS

Four main problem areas were identified:

- **Who controls land development?**
Traditional Chiefs are still the most important players in their villages and they are the major driving force in the urbanisation process. They are also the main beneficiaries. Urban land development has led to a transfer of resources from poor to rich.
- **Agricultural system changes**
Farms, particularly those run by women, are being lost to residential development. The productivity of the land remaining has

declined, and there is limited scope for agricultural intensification. Farming is also perceived as unattractive and unprofitable and there is a lack of knowledge about local urban agriculture.

- **Environmental management**
This is poor and uncoordinated, particularly the management of solid wastes and sewage effluent.
- **Planning deficiencies**
Although changes are taking place rapidly, there is no strategic regional planning and development planning at the village level is either weak or non-existent. The whole process is handicapped by a lack of information and inadequate simple base maps. There is also very little community participation in the planning process.

CHARACTERISING THE CHANGES

To characterise the demographic and socio-economic changes, household surveys were undertaken in four villages ranging from the rural to the urban in character. The table shows some of the results (below).

The transition from farming to more city-based work is well marked by changes in occupation, the loss in the number of farms and the lack of compensation for those farmers who are dispossessed of their land.

But many people, even in the urban village, tend to hang on until the last possible moment to the dwindling and increasingly insecure land available for agriculture. This can lead to pressure to intensify

production on the remaining plots, but the situation militates against this because of the insecurity of tenure. So much of the remaining farmland is still under traditional “bush fallow” cropping systems, but without the bush fallow. This is clearly unsustainable. In order to assess the potential for intensification, reviews were undertaken of soil ameliorants that are available



within the peri-urban system. Trials at research stations and on farms showed that vegetable production systems using poultry manure are favourable from an agronomic and economic point of view and the use of such manures are acceptable to the farmers. The use of cover crops was also investigated on farms and has aroused interest. In addition, studies by local university students were commissioned to characterise natural-resource-based livelihoods in the centre of Kumasi, so as to assess how they have survived in the present fully urbanised situation.

Other keys issues emerging from the surveys include:

- Food crop farmers are stuck in a cycle of declining production and a lack of capital to move to other occupations.
- Low density housing leads to high costs of providing services such as water and electricity.
- Waste disposal lags well behind other services giving rise to pollution problems. While 52% of sampled peri-urban villages had electricity and 36% had piped water, only 8% had waste collection systems.
- There are few job opportunities for those without capital or skills training.

A LACK OF INFORMATION

Planning is often hampered by a lack of information. But data is time consuming to collect and to interpret into useful information.

VILLAGE NAME	Apatrapa	Aburaso	Duase	Swedru
	Urban	Peri-urban	Peri-urban	Rural
People with farming as main occupation	30%	30%	34%	82%
No of farms lost to urbanisation	228	106	19	11
Farms on temporarily borrowed land	35%	14%	1%	<1%
No of farmers given compensation	7%	9%	0	0

In the meantime everything is changing and rapidly becomes out of date. To try and overcome this problem, the project team experimented with the use of modern information technologies such as remote sensing, geographical information systems (GIS) and global positioning systems (GPS) to augment field surveys combined with traditional participatory and rapid rural assessment methods.

Maps help to locate and quantify problems and put the issues 'on the table'. The extent of farm and housing plots and disputed boundaries are there for all to see irrespective of age, sex and literacy. Very high-resolution satellite images can now provide such maps on which individual houses and farms are easily identified. Opportunities have opened up for the poor, women and tenants to indicate their views and to bring their indigenous knowledge into village-level planning, which previously was not the case. In the village of Swedru, just to the north of Kumasi, most villagers quickly related to the new information and were able to interpret it easily. It offered villagers a new and revealing perspective of their environment, which was used to stimulate and encourage participation in the development of their own village. One head of family, Mr Mensah (see above) found the maps so useful that a copy was left with him at his request. The maps are now helping communities and researchers to examine other issues such as the conflicts surrounding a watercourse conveying untreated sewage from a broken treatment plant. It passes through an area of traditional valley bottom agriculture and although farmers are producing good quality tomatoes and lettuces the risks to human health are enormous and widespread when produce is sold in the city markets. The land is owned by the local chief but farmed by the local villagers. The local university is responsible for the sewage treatment and has claims on the land as well. Clearly there are many



Mr Mensah's house

tangled issues to sort out but mapping the area and introducing effective methods of communication such as 'listen and encourage' is a good start point. Getting the local chiefs' into discussion groups at community workshops and creating an informal atmosphere for frank discussions is another step in the right direction.

R6799 Kumasi Natural Resources Management, Ghana.

R6880 Development of Improved Methods of Collecting, Storing, Accessing and Managing Natural Resource Information, Ghana.

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