

LIVING OFF-ROAD: AN EXPLORATION OF ACCESSIBILITY ISSUES IN RURAL WEST AFRICA

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This paper is concerned with women and men who live in off-road rural settlements - defined here as settlements away from the paved road which, for at least part of each year, are inaccessible or accessible only with difficulty by motorised transport. Although the inhabitants of such settlements are often markedly poorer than those resident in comparable roadside locations in the same region, they have received limited *specific* attention in the development literature [Moore's (1979) paper is a notable exception]. However, a series of recent village-level travel and transport surveys have begun to draw greater attention to the critical importance of accessibility in the design of development projects and programmes. (The World Bank's Sub-Saharan Africa Transport Policy Programme -SSATP - for example, has initiated a number of studies, including Barwell 1996).

Here, I want to extend the discussion beyond the immediate mechanics of moving people and goods, which has been the focus of work by transport engineers, to a rather broader consideration of what it can mean to live in an off-road village, in terms of getting to (or trying to get to) market, obtaining medical attention etc, and to tentatively explore the political implications of off-road residence with particular reference to the impact of decentralisation policies. This is followed by a brief review of the prospects for improving access. The discussion is based principally on on-going research in coastal Ghana, but also draws on my earlier work on rural transport and trade in Nigeria.

Background

1. Rural road transport conditions in Sub-Saharan Africa

Rural transport conditions in Sub-Saharan Africa are remarkably poor, even by comparison with Asia and Latin America (Platteau 1996). Investment in transport infrastructure tended to come late, generally in the colonial period, when most countries experienced their first major phase of rail and road construction and this produced a dendritic system, firmly directed to the evacuation of primary produce to coastal ports for onward shipment to Europe (Taaffe, Morrill and Gould 1963). In favoured export production zones such as Ghana's cocoa areas motorised transport expanded rapidly from the mid-1920s, eventually producing nodes of high accessibility in some areas by the late 1950s which assisted movement of goods from rural areas to major bulking points (Gould 1960:110). Across rural Sub-Saharan Africa, however,

head loading - mostly by women - has continued as the dominant mode of transporting goods from and to rural households (Moore 1979; McCall 1985; Barwell et al. 1985; Doran 1990; Dawson and Barwell 1993).

Economic decline and the imposition of structural adjustment programmes tended to exacerbate strains on existing inadequate road transport systems in the 1980s and early 1990s. There was a deterioration in road construction standards and road maintenance, in purchasing levels of new vehicles and in vehicle maintenance (Levy and Malone 1988, Riverson et al. 1991; Riverson and Carapetis 1991, though since the early 1990s there has been more emphasis on road maintenance (encouraged by the SSATP's Road Maintenance Initiative), notably in Uganda, and increasingly road maintenance is being contracted out (Plumbe et al. 1995). In Nigeria, where there was an enormous expansion in road construction and vehicle ownership in the 1970s, fuelled by the oil boom, the impact of recession and the imposition of a structural adjustment programme on road transport conditions has been particularly devastating (Filani 1993, Porter 1997). Guyer (1997: 86-91) provides a fascinating, closely observed view of boom and decline and its transport implications in the Ibadan area, where the Datsun pickup became a 'social institution' in the halcyon years of the oil boom. In Ghana, where there had been severe recession for some years prior to the imposition of structural adjustment policies in the early 80s, road conditions were very poor by comparison with Nigeria. In 1988 only 28% of the country's paved roads were in good condition, compared to 67% in Nigeria, where the impact of the oil-financed road construction programme were still being experienced (World Bank 1994). In some other countries such as Uganda and Mozambique conditions were substantially worse again, with only 10 and 12%, respectively, of paved roads in good condition.

2. Current transport conditions in Ghana

Despite the considerable effort that has gone into road rehabilitation programmes in Ghana in recent years, road condition studies indicate that there has been limited overall improvement, with only 29% of Ghana's paved roads and 10% of gravel roads in good condition in 1997 (Wilbur Smith Associates, 1998). So far as feeder roads are concerned, government policy in Ghana now emphasises maintenance of the so-called 'maintainable network': some of the 'non-maintainable roads' - which require reconstruction - are consequently falling into disuse. Feeder roads are maintained by contractors using labour based techniques which reduce foreign exchange costs. By 1995 the Feeder Roads Department had trained 93 local contractors and equipped about 54 of these with light implements (tractor, chainsaw, light rollers and hand tools) to undertake labour-based road construction (Ashong, 1996) (1).

In the off-road coastal settlements in Ghana's Central Region, the roads within and close to the settlement are generally maintained by the villagers: women carry sand, gravel and stones to the potholes, men fill and level them, using their own shovels and pick axes. When the road needs attention - which may be as often as once per week during heavy rains - the gong-gong is beaten and every able-bodied inhabitant, including the Chief and older children are expected to participate. Fines are often imposed (2000c in one settlement) on those who do not assist.

The major roads between settlements are the responsibility of the Highways Department: a common complaint is that 'they just weed along the roadside - not much else. They are supposed to mend the potholes but they don't usually do it'. Many of these roads are shown on maps in use in government offices in Accra as 'gravel'; ostensibly a class of road quality below tarmac but higher than earth roads. This is misleading since many of the so-called gravel roads are indistinguishable from dirt tracks. In the rolling topography of Gomoa district, Central Region, the 4-6" gravel surface is rapidly lost during the rains and gulleys appear. After four years the surface may have totally disappeared (2).

In addition to road quality, it is necessary to consider transport availability. Ghana does not have vehicle assembly plants (apart from the Neoplan bus plant at Kumasi) but imports large numbers of second-hand vehicles from Europe. These are often old models for which it is difficult to find spare parts (which are taxed): even obtaining parts for new models can take considerable time, since agents cannot afford to keep large numbers of spare parts in stock.

The vast majority of motorised vehicles are based in settlements along the paved roads and there is widespread reluctance among vehicle owners to take vehicles on unpaved roads unless the rewards are high. Interviews with transporters in Central Region suggest it is common to charge more for journeys over bad roads, since in these conditions vehicles deteriorate more rapidly. Anyinam (1994) reports that agricultural prices in some remote rural areas have dropped because of increased transport costs associated with road deterioration. According to Beenhacker (1987) tyre life is reduced 25 to 50% of normal life under poor road conditions: when six new truck tyres cost around 4 million cedis (May 1998) such considerations are important. Finding spare parts is a difficult business, too. One transporter with a six cylinder Mitsubishi truck based in Cape Coast explained how he first travels to Accra to try the Mitsubishi agent, but if he is unsuccessful he then sends a mechanic to search for a used spare part. Since the transporter has a regular arrangement with a group of market women to take them to local markets, having his vehicle out of action for a few weeks is extremely serious, for the women may take their custom to another transport business.

In northern Ghana bicycles are widespread and ridden both by men and women. In southern Ghana bicycle ownership is less common, though apparently increasing. Chinese and other Asian makes, which are particularly common, are the cheapest. A five year old second-hand bicycle can be obtained for around 50,000 cedis (under £20). Non-motorised transport apart from bicycles has not made great inroads. A pilot project funded by the World Bank which included NMTs provides evidence of some of the difficulties such projects may encounter. An arrangement was made with a local manufacturer to construct bicycle trailers, but these were too heavy and needed redesigning. Women involved in the labour-based road construction component of the project were expected to purchase the bicycle trailers. Unfortunately, the programme assumed prior bicycle ownership but few people could afford to purchase both bicycle and trailer (the trailer costing 125,000 cedis in October 1997). Attempts at community trailer purchase apparently failed because of debates concerning maintenance. Consequently, although people are receptive to the idea of having bicycle trailers, the financial constraints and difficulties in resolving community ownership issues have yet to be resolved.

Village studies in coastal Ghana

Coastal Ghana is a densely populated region which supports farmers, artisanal fisherfolk and salt winners in a complex multi-use system. Despite the relatively high population densities across the region as a whole, there are many quite isolated settlements where access to major service and market centres is difficult. Off-road populations in these areas are characteristically markedly poorer than those in comparable roadside locations in the same district. An extreme case is provided by the lagoon-side village of Genui in Keta district, where access to the nearest market centre of Anloga (and, indeed, all other settlements) is by boat only. Even drinking water has to be transported across the lagoon, at substantial cost to the inhabitants: payments have to be made for the water to the well owner, to rent boats to transport the water, and even to rent pots to hold the water (since few people can afford the 4000 cedis for a clay pot). In such circumstances it is hardly surprising that Genui's population is small and extremely poor.

Ongoing participatory research in progress in Gomoa district, Central Region, is specifically focussed on the complexities of off-road residence. Conditions in some of the villages where research is underway are outlined briefly below.

1. Adabra: Adabra is located in north-east Gomoa, in a region of moderately high rainfall (90 -110 cm mean annual rainfall, according to the District Development Plan, 1996) and mixed gravel/sandy loam soils. The settlement's farmers grow maize, cassava, pepper, yam and some tomatoes and groundnuts for sale, with maize and cassava as the principal crops. The farmers here have ample land and most also have ample labour. Ewe and other stranger farmers have settled in the village, providing additional labour.

Adabra is approximately five miles from the nearest tarred road. The tracks which connect it to the tarred road are eroded with many potholes. The road out of Adabra is sometimes impassable in years of heavy rains for long periods, notably in June and July. Local chiefs have apparently made requests to the district administration for assistance with road improvement in the area. The road contract was reportedly awarded at one point but the contractor absconded before the road was built.

Up to about 25 years ago Adabra was an important market centre. The loss of the market is much regretted and blamed on deterioration of local roads. (It is possibly also related to the improvement of the main Accra-Cape Coast road, an issue to be investigated further.) Local women complain particularly about the cost of taking goods to market at Kasoa (the main market centre for this area), saying they have insufficient funds to pay transport fares, even when the road is motorable, and thus are forced to headload their wares. On other occasions, if they have funds for transport, all the vehicles passing through the village may be full.

2. Sampa: Sampa is located in western Gomoa, north of the Accra-Cape Coast road in an area of clay/gravels with moderate rainfall. It is larger and somewhat more prosperous than the other off-road settlements selected for detailed study. A wider range of crops are cultivated here: tomatoes, oranges, palm oil, sugar cane and pepper, in addition to maize and cassava. Maize, cassava and oranges are all produced in sufficient quantities to attract regular visits

from local wholesale dealers.

Sampa is situated about 5 miles from the main road: the first mile from the main road was once tarred (reportedly in 1956) but is now badly eroded. The remainder, apart from a small tarred section at Sampa Junction, is untarred with corrugations. Along steeper sections of the road there is severe gullying and the road becomes very narrow. It is impassible after heavy rains. The road was last repaired three years ago when the children of a local chief paid for a grader in order to make the road motorable for their father's funeral. The current chief has been to Accra to request assistance from the Minister of Roads and Transport and has been promised help 'at some time in the future'.

3. Lome: Lome and its associated temporary farm settlements are located in an area designated by the Gomoa district administration's maps as a 'Potential Agricultural Region'. The area has moderate to good rainfall in a bimodal distribution and soils are a mix of gravels and sandy loams.

Lome is located just under 4 miles from the nearest tarred road along a narrow graded track with some corrugations and other signs of erosion. Associated with the main settlement at Lome are about 20 temporary farm settlements where shifting cultivation has been practised by Lome farmers for around 40 years. Access from Lome to the temporary farm settlements (some of which are up to five miles from the main settlement) is by footpath only: vehicle access is impossible.

Farmers at the temporary settlements sleep in barns ('osan') during the farming season, returning only at weekends to the parent settlement. The temporary settlements are occupied by men and their wives, with perhaps up to twenty based in each of the temporary settlements. Women return to Lome when there is less work for them to do.

Lome women spend a great deal of time after harvest carrying crops between the temporary settlements and the parent village. Maize is the principal crop grown because cassava is too bulky in its unprocessed state to justify head loading to Lome. According to the farmers if they had a corn mill at the temporary farm they would grow cassava and process gari. Maize is headloaded daily to Lome by women in the harvest season. Apparently there used to be storage barns at intermediate points, but these are no longer utilised because of theft: nowadays barns must be either in Lome or at the temporary settlement. Some farmers remain in the temporary settlement after harvest to guard the maize crop and to grow tomatoes, garden eggs and pepper in the minor season. (Tomatoes are carried back to Lome every four days, peppers preferably within one day of harvest and a maximum of three to four days).

4. Abora: This settlement is located just south of the main Accra - Cape Coast road (which bisects the district) in an area of somewhat difficult clay soils and limited rainfall. The area between the road and the coast often has only one wet season per year and rainfall is reportedly relatively low and sporadic (between 70 and 90 cm per annum according to the District Development Plan, 1996). The improved 110 day maize variety is cultivated in this area; this grows well but is susceptible to weevils. Other crops grown include cassava (for home consumption) and recently a number of farmers have started cashew production.

Abora is only 2 miles from the tarred road and provides evidence of the difficulties that even settlements a short distance from good transport can experience. It is located on a rough narrow track which is reportedly totally impassable in periods of heavy rain and for up to three days afterwards. Transport is irregular and comes to the settlement only when bringing in people or goods from the main road. Much produce is head loaded to the main road.

The village elders have made the decision to move to a new site, three quarters of a mile closer to the main road, in order to ease their access problems. The fact that the settlement has few facilities makes the decision to move feasible, though the relocation will apparently occur over a long period since villagers do not generally have the funds to build new houses. The village is certainly relatively poor by local standards (no one, for instance, owns a grinding machine - maize has to be taken to Apam Junction for grinding; there are no stores or kiosks; physical infrastructure of all types is very limited).

In northern Nigeria I have found similar difficulties to that experienced at Abora in settlements with poor access which are situated only a relatively short distance from a paved road. At the market centre of Labeng, on the Jos Plateau, for example, which is only three kms from a paved road, only four or five vehicles at most visited on market day due to the poor condition of the track to the settlement; on non-market days and during the rainy season, when the road is often impassable, no vehicles come to the settlement. Distance decay from favoured roadside locations can be extremely rapid in these conditions, and tends to lead to population movement (as is currently planned at Abora) or selective out-migration of the more entrepreneurial (generally younger) men and women, and in the case of market centres, market closure. Indeed, market decline and closure in off-road locations appears frequently to be one of the unforeseen effects of road construction programmes: this has certainly been the case in northern and central Nigeria (Porter 1988, 1995).

Living off-road

Getting to market to sell produce, getting to school, obtaining medical attention, finding employment, buying spare parts, farm inputs and consumer items not available locally, depositing money or trying to arrange a loan at the bank - these are often difficult tasks for the rural poor in general, but for the residents of off-road settlements the hurdles to be crossed are additionally complex. For women, the financial and time constraints and, in some cases, the cultural constraints can be particularly restrictive. A few examples, with reference to access to markets and medical care, illustrate the difficulties, frustrations and costs of off-road residence.

In coastal Ghana, as in much of West Africa, women are the principal marketers of agricultural produce. When it comes to taking produce to market, women who live off-road frequently face particularly arduous treks, head loading quantities of produce to the nearest market centre. Off-road journeys by motor vehicle - when vehicles are available - may be more expensive, because of the increased costs of maintenance, and women are less likely than men to be able to afford transport, even if vehicles pass near their village. Thus, while it is possible, for example, to get from Sampa to the market centre at Kyiren Nkwanta by vehicle

in under one hour, many women trek for three hours with maize, cassava and tomatoes: men are supposed to give their wives transport money but do not necessarily do so and, if they do not, the wife must spend her own money, or walk. About four or five tro-tros and taxis come to Sampa to pick people up on market days in the main agricultural season (there is no transport based in the village), but sometimes only one or two vehicles turn up. It costs 600 cedis for a place on the tro-tro and 1,000 cedis for each minibag of maize transported. In the minor season there is no transport from Sampa to the main road. Although Sampa is a relatively wealthy off-road settlement only two inhabitants - both men - own bicycles. When women were asked why they did not ride bicycles the common answer was, 'just poverty'.

At Adabra, similarly, women talk about the difficulties of getting produce to the main market at Kasoa, 15 miles away. No transport is based in the village and frequently no vehicle whatsoever arrives in the settlement on market day. Sometimes, after heavy rains the road is completely washed away and it is too dangerous for anyone to travel. If vehicles arrive, they may already be full. The women interviewed here emphasised that men are richer and 'can afford more transport'. It costs 1000 cedis now to travel to Kasoa by tro-tro, following a recent rise in transport prices (3). In the dry season women generally cannot afford the fare to Kasoa and have to walk. Getting to market is often vital, because otherwise produce may spoil rapidly. Fresh cassava, for example, reportedly changes colour four days after harvesting and, if it has not been possible to take it to market it, then has to be dried and sold at a lower price. Hine (1984), reporting work conducted in the Ashanti region of Ghana, observes that 'little evidence was found to suggest that produce was lost because of impassable roads', and this may be the case in Adabra (though some local farmers report otherwise), but it is important to also consider the reduction in market prices received due to deterioration in produce quality (4). There are other benefits from market visits too, for it is usually possible to purchase items unavailable in the village and transport them home for resale. Salt, pepper and fish are regularly brought back to Adabra for resale by women who subsequently retail their wares on tables outside the house. In settlements like Adabra which once had a market, the difficulties of market access seem to be most keenly felt. Old men and women here reminisce about the days when they had a big market and 'everyone came here...from Nianyanu, Accra, Mankessim, Fetteh' The costs of head loading heavy baskets of maize and other produce are born by women not just in terms of time unavailable for other tasks or leisure, but also in terms of physical injury (see Doran 1990: 58; Steele 1993)

In some areas, such as Moslem Borno (north-east Nigeria), there are additional cultural complications which restrict women's movements notably with reference to marketing, often with particularly severe impact on women living off-road (Porter 1995). In only one of the Ghana coastal settlements studied, Sampa, do women's movements to market seem at all restricted. Here, according to women and men, women must obtain permission from their husbands if they wish to stay overnight on a trading expedition. Sometimes women have difficulty getting transport back to Sampa and in cases where the wife does not return in time to prepare her husband's evening meal the husband may 'follow her to see what she is doing'.

Access to health care is the other major issue which people tend to talk about in discussions about their lives in off-road settlements. Health facilities of any kind are rare in off-road locations, yet ironically off-road inhabitants are often the most in need of medical assistance,

since water supplies are frequently poor and poverty levels above regional averages. At Sampa, for example, where water is drawn from the River Odi, half a kilometre distant, there are sporadic outbreaks of guinea worm but the only health personnel in the settlement are two traditional birth attendants and the nearest clinic is seven miles away. If anyone is seriously ill the usual procedure is to walk to the village at the road junction and hire a taxi to come back to the village to collect the patient. It will cost 20,000 cedis to take the taxi to hospital and, if the taxi is kept for the return journey, 30,000 cedis (over £10), this being the cost of daily hire of a taxi.

Similarly, at Adabra there is only a TBA (traditional birth attendant). The nearest clinics are about 5 miles distant and when someone falls seriously ill a relative will take one of the six bicycles in the village to the nearest village with a vehicle and hire it. It costs c. 30-40,000 cedis to charter the taxi to return to the village, collect the patient and transport them to the clinic at Kanyako. Such arrangements are the norm across coastal Ghana and elsewhere in West Africa, though in less densely populated areas the distances to hospital are often much greater and it may be impossible to make the journey at all. Research suggests that visits to clinics for more routine reasons fall off rapidly after four to five miles (Howe and Richards 1984:15). As Airey (1992) concludes from a study of hospital utilisation in Meru district, Kenya, high costs of medical treatment are likely to be an even greater barrier to treatment than distance, but where high medical costs are compounded by high travel costs the barriers to treatment must inevitably be even more pronounced.

Decentralisation and the politics of off-road residence

To live off-road is to be invisible; this is the strongest message which has emerged from my current work in Ghana and earlier work in Nigeria. As villagers at Tregui in Keta district put it, 'we are part of Keta district but are forgotten'. Lack of a good road and other facilities is not infrequently blamed by inhabitants of off-road settlements on their powerlessness to influence decision making by policy makers. In countries like Ghana and Nigeria, personal contact is often an essential component in the decision-making process. Off-road villagers argue that it is particularly difficult for them to maintain the intensive lobbying at government offices required to obtain facilities such as clinics and schools (Porter 1997). The link between political influence and road construction is an interesting one. Political interests have had a strong influence on road alignments across much of West Africa, and Ghana is no exception. Gould (1960) writes, 'If an area is known as a stronghold of the Opposition, will it get funds for tarring its roads? And those roads that swing around the villages of Opposition chiefs, was it simply a matter of terrain and drainage?

Clearly, roads cannot be built everywhere, but it is important to acknowledge the political factors which influence both road construction and road maintenance programmes. Prioritisation of road improvement in Ghana, according to a senior roads officer is shaped by reference to three factors: (1) areas of high agricultural production, (2) construction of 'missing links', to ease regional road networks and (3) politics, 'since politicians make the final decisions'. In this context the implications of the current trend towards decentralisation in sub-Saharan Africa need consideration. Decentralisation has been promoted by the World

Bank as an element of good governance in recent structural adjustment programmes, and, in theory, might be expected to improve the lot of less accessible areas including off-road settlements and their inhabitants since it brings government closer to the people. In Ghana, where a decentralisation programme has been in place since 1988 the evidence is not, as yet, encouraging. The District Assemblies themselves have lacked sufficient funds to undertake substantial development projects and where projects eventually emerge their location may well more strongly reflect local power relations than relative need. On the basis of a detailed study of two Ghanaian districts (one coastal), Ayee (1996) suggests 'decentralisation may help to augment the dominance of those who, because of wealth or status, are already powerful at the local level'. District Assembly members are required to meet the people of their electoral area once a month, but many are employed outside the district and cannot afford transport fares to their electoral areas: it is particularly unlikely that they will venture into areas where road access is difficult (5). This conclusion is in line with experience elsewhere: Samoff (1990) observes that 'many, perhaps most, decentralisation efforts appear not to have improved local service delivery or the general standard of living in rural areas'.

Prospects for improving access

The funds for adequate feeder road construction and maintenance by government and other agencies to serve all current off-road areas in regions like coastal Ghana will not be available for the foreseeable future. It is clearly necessary to explore alternative means by which the isolation and associated poverty of off-road dwellers can be reduced. An extension of community participation in road maintenance through unpaid labour contributions of the type currently found within Ghana's coastal settlements could be one way forward, though as Ostrom and others have pointed out, this approach should be pursued with caution, since it is difficult to ensure an equitable distribution of work among community members, and 'free riders' are likely to take advantage of community efforts (Ostrom et al. 1993: 77, 85) (6). One of the questions to be explored in my current work in Ghana is the equitableness of current village-level road maintenance between men and women and richer and poorer groups and attitudes within the villages to extending community maintenance (particularly small-scale spot improvements) to inter-village roads. In the former tin areas of the Jos Plateau in the early 1990s off-road villages were attempting fairly extensive roadworks, culvert repair and even bridge construction; here the constraint on extension of such activities seemed to be merely absence of support from the Local Government for more complex tasks. In coastal Ghana, however, the common perspective seems to be that inter-village roads belong to the government (and specifically the Department of Feeder Roads) and it is likely that this inhibits community maintenance efforts. (This view is common in Ghana, according to Ministry of Agriculture Village Infrastructure Project staff. There are also obvious further potential problems in apportioning work where a feeder road serves several villages.)

Programmes to introduce intermediate transport technologies which can operate over suitable tracks seem to be the most obvious route to improving access, but as experience in northern Ghana suggests, are not necessarily easily implemented. Barwell (1996:62) points out that IMTs, though cheap by comparison with a motor vehicle, are still expensive for poor farmers. 'There is need to establish rural credit systems for IMT which are more widely distributed,

impose less rigorous conditions and have more appropriate administrative procedures than those which typically exist at present, and accept the IMT as security for the loan'. In coastal Ghana the impact of IMTs would probably be much greater for men than for women who often have less funds available for transport (though it is important to recognise that there is considerable variation in income levels among women as among men in off-road locations). Most of the women interviewed in off-road villages to date seem receptive to the use of bicycle transport, for example, but only one woman owner (an ADRA 'motivator') has been encountered.

There may be some resistance, moreover, to widespread acceptance of IMTs in the coastal zone. One Central Region feeder roads engineer interviewed was very pessimistic about the value of an IMT programme, 'the culture of the people here may not even permit it'; additionally, he observed that the terrain is uncondusive and the heavy loads in cash crop areas would be unsuitable for IMTs. Other government officials in Accra similarly suggest that bicycles are more appropriate for the north of Ghana, 'in the south people want to buy a car, bicycles are generally a northern thing'.

Whether IMTs are acceptable and workable or not, it seems appropriate to consider a range of other means whereby the accessibility of off-road inhabitants can be improved. Community ownership of motor vehicles in settlements with motor access is one possibility. In the village of Caesarkope (Dangbe East district) a satisfactory arrangement seems to operate whereby the chief runs a pickup for general use by the village. However, Caesarkope is essentially a one-family village. Most villages have more complex family structures and there may be the additional complicating factor of recent/temporary immigrant populations. The potential for cooperative transport for groups such as off-road women marketers is, nonetheless, worthy of further research and will be explored in future fieldwork.

In coastal Ghana, as in West Africa in general, the majority of transport services are owned and operated by men. In areas where women are major crop marketers it would seem advantageous for women to obtain greater control of transport. I have encountered only one woman transport owner, a farmer and petty trader in one of the off-road villages (Abora). She managed to amass 1.2 million cedis by trading which she used in part payment for a taxi (on a 'work and pay' arrangement) because she had difficulty getting to markets. She has paid off an additional 1.3 m cedis and has one million outstanding. The taxi is driven by the son of a friend who is paid 30,000 cedis a month and is the only vehicle based in the village. She hopes to sell the taxi soon and buy a tro-tro but is experiencing some difficulty obtaining additional funds. Support for greater ownership of transport by such women through improved credit arrangements could be important in providing transport services more precisely tailored to women's needs. This is an issue on which there does not appear to have been any specific research as yet in sub-Saharan Africa.

In addition to improving access to the paved road system there may be complementary measures which could be implemented to improve value-added to local production such as expansion of local processing technologies, and assistance for women in acquisition of grinding machines and similar equipment (those I encountered in off-road villages in coastal Ghana are all owned by men). Another interesting question is the potential role of electronic

communications in improving linkages to major centres, for providing market price information etc. However, although e-mail has apparently reached rural Mali, Kenya and South Africa, for example, and Mandela has reportedly pledged support for a telecommunications development fund that aims to extend communications 'to every village in Africa', the development of even district-level telecentres is probably some way off in most countries (7). The result, when (and if) they arrive, may be to produce even greater gaps between district administrative headquarters and marginalised off-road centres.

To conclude, inhabitants of off-road settlements in coastal Ghana, as elsewhere in West Africa, are frequently marginalised and invisible even to members of local administrations. Decentralisation programmes now in place bring some devolution of power down to local administrative headquarters, but between local government headquarters and men and women living in off-road settlements contact often remains minimal and opportunities for lobbying extremely rare. The specific economic and social welfare problems which are faced daily as a result of poor access cannot be easily resolved. Expanded community maintenance of access routes, IMTs, cooperative transport arrangements and low-cost off-road crop processing may have a role to play in specific locations, but economic and cultural constraints on their use and the politics of implementation (including gender relations) need to be very carefully explored prior to and during the development of new projects.

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Notes

1. The implements cost c. \$ US 150,000 in total and the loan is paid back over 4 years by the contractor, who is guaranteed work over this period. The project has been supported by the World Bank, Danida and USAID.
2. The surface of gravel roads can be substantially improved by laying down a bituminous surface on steep slope sections (an extra gravel layer, two coats of bitumen, topped by stone chippings) but at double the cost of a standard gravel surface this treatment is rarely applied (only one road in Gomoa district, for example, has received this treatment).
3. Men interviewed at the same time as the women, a few days after a national increase in fares, were not aware of the increased fare to Kasoa.
4. Though see Chambers 1997:20-21 re overestimation of post-harvest crop losses.
5. District Assembly sub-committees face similar problems. Thus, in the case of District Environmental Management Committees, for example, there is generally no adequate representation of areas outside the district headquarters and little knowledge of DEMCs

existence there (Porter and Young 1998).

6. There have been recent contributions to this debate on the GREAT network and rural-transport-development@mailbase.ac.uk (D. Seddon, M. Wattam, P. Winkelmann, N. Sieber). Winkelmann provides a case study in Flores, Indonesia, where self-help initiatives on village access roads have been successful.

7. Telecentres have received some attention in the AFR-FEM Internet Working Group's online discussions on ICTs (Information and Communications Technology), with debates about telephone cooperatives, use of the internet by women's groups, and HF-radio. In Accra a new Centre for Women's Information Research and Support (CWIRS) has just been established. One interesting community media pilot project by Eco News Africa, based in Nairobi, will put up FM community radio stations in three rural communities in Tanzania, Uganda and Kenya using solar power and HF-radio/internet links, in areas with little or no access to electricity and telephone lines (M. Wambui, AFR-FEM, 8.4.98). In Bangladesh, the Grameen Bank apparently provides loans for rural women to purchase mobile phones but the impact of this programme is somewhat controversial (Pramada Menon, GREAT network, 4.9.98.)

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