Ghanaian Farmers’ Lukewarm Reforestation: Environmental degradation, the timber option and ambiguous legislation

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This paper is a result of a decade of anthropological research in Ghana applied to two development projects concerned with reforestation and environmental preservation in the Sefwi area of southwestern Ghana: the Protected Areas Development Program and the Forest Resource Creation Project. Both were sponsored by the European Union, the first was implemented by ‘ULG Consultants Northumbrian Ltd’, the second by the Italian NGO ‘Ricerca e Cooperazione’. These projects were two of several attempts by donors, the Ghanaian government, NGOs and timber firms to address the issue of deforestation in Southern Ghana since the mid 1990s. Views similar to the ones presented here are expressed, with increasing concern, by many of those working towards a sustainable environmental and economic future for the forest belt.

This article is an attempt to put to use anthropological findings in an ongoing process of transformation which concerns both agriculture and timber tenure. Since the promulgation of Act 547 in 1997, farmers are, for the first time in the history of the Gold Coast and Ghana, planting indigenous timber species of commercial value on their farms and maintaining these with the intention of making a profit from the harvest. Research in this context was aimed both at understanding the dynamic situation and at identifying setbacks and bottlenecks by presenting potential beneficiaries’ concerns to the organisations implementing the projects. In this paper I discuss the environmental necessity and the economic potential of timber growing in the forest belt of West Africa by exposing the factors currently hampering this process and suggesting possible solutions.

To understand the current ecological and economic situation of Southern Ghana one needs to go back in time over a century. The spread of cocoa in the early twentieth century induced the colonial administration to define its land tenurial policy (Agbosu 1983; Grier 1987). Even though farmers were at times unsatisfied with the prices, the introduction of cocoa in the forest belt proceeded at an impressive speed and by 1951 cocoa revenue reached 60 million pounds. As cocoa production soared, the colonial administration developed a land tenure policy defining the rights of chiefs, farmers and the government. The Gold Coast government interpreted ‘traditional’ law to the effect that land rights were controlled by chiefs who allotted agricultural rights to farmers and timber rights to logging firms.
Farming and Logging

The colonial and postcolonial economy based on mining, logging and cocoa was aimed at extracting and exporting non-renewable natural resources without much concern for what would happen when products approached exhaustion. With reference to both timber resources and cocoa farming, the differential advantage granted by the forest environment of southern Ghana has recently been aptly termed ‘forest rent’ (Ruf 1987, Austin 2005). The cocoa industry consumed the non-renewable fertility accumulated in the soil of the moist-evergreen forest while minerals and logs were extracted and exported. The right to fell timber was granted to timber firms while chiefs sold the right of cultivation to immigrant farmers (the indigenous population acquired agricultural rights for free by clearing the forest). Overlapping and dual control of different resources on the same land generated separate and hostile economic regimes, rendering the combined, harmonious management of crops and timber impossible (cf. Inkoom 1995). Not only was such an economy unsustainable, it was obviously suicidal in the long-run although in the short term it guaranteed ready cash as land was happily allocated to farmers and timber businessmen. Hostility between farming and logging amplified the negative impact of both activities on the environment.

The consequences of the exclusion of farmers from timber revenue soon became apparent. Farmers, having no stake in trees, which belonged to the chiefs and the government to be sold to timber firms, were led to view the forest as an impediment to the expansion of cocoa farming. Farmers prepared and still prepare their farms by slashing and burning all or most vegetable cover: they have had no interest in preserving timber and have thus destroyed most trees growing spontaneously on their farm (Ruf 2001, Boni 2005). Precious timber that could have been logged and exported was fell by farmers and simply left to rot or, more simply, killed on the spot by setting fire to the base of the tree. The financial waste was immense. Every farmer’s typical annual clearing of a couple of acres often destroyed timber worth thousands dollars. Provocatively one can ask how the revenue lost due to the agricultural destruction of timber compares to the income derived from cocoa – the commercial crop that replaced it - over the last century.

The logging industry reacted with a punitive response to the farmers’ destruction of timber that firms rightly considered as legally theirs. Firms seldom paid compensation, or paid inadequate amounts, for damages produced by harvesting operations on farms and often closed timber roads to passengers’ traffic in the hope of slowing the spread of agriculture (Boni 1999). In recent decades loggers have increasingly plundered the Ghanaian forest, over exploited the forests beyond the guidelines officially provided by the government, bought the silence of complacent forestry officials with bribes and showed no concern for the establishment of a sustainable timber industry (Friends of the Earth 1992).

Since the early decades of the twentieth century the government attempted to safeguard timber resources from farmers’ clearings: it established Forest Reserves where farming was prohibited and ‘Protected Timber Lands’ that could not be cultivated up to the completion of a logging cycle (cf.
Fairhead and Leach 1998). These areas which should have preserved timber for rational and sustainable logging, were systematically encroached by farmers (England 1993). Insistent attempts to establish a *taungya* system – land is allocated by government to farmers who are to grow food crops while maintaining timber owned by the government - have also failed.\(^1\) One could blame the farmers’ greed for land, chiefs’ greed for money or the governments’ inability to enforce forest protection for the destruction of valuable timber but these explanations would neglect the specific contribution of an irrational land tenure policy to this devastation. Farmers have been given no benefits for the timber that grows on their farms but have held the *de facto* right to destroy it.

**Environmental degradation**

Extraction economics is now approaching its demise. The logging business is heading towards a deep and perhaps irreversible crisis as there is now little timber left to fell off-reserve and Forest Reserves are over exploited and increasingly encroached. The whole industry, which represents one of the few Ghanaian exports and one of the major sources of revenue for the government and chiefs, may close down in a few decades for lack of raw material.

Farmers’ outlook for the future is equally grim. After clearing the forest and having exploited the soil’s fertility with the first cocoa cycle, subsequent cocoa plantings offer less benefits and require higher costs (Ruf and Zadi 1998). In many parts of Ghana which underwent monoculture, the land is thought as no longer suitable for cocoa and farmers have had to turn to less profitable agricultural crops; Sefwi farmers feel they may face the same fate in the near future. The Sefwi area introduced cocoa production relatively late and only in the last couple of decades has it begun to witness the unequivocal signs of environmental degradation that have already invested most of Southern Ghana. In Sefwi many farmers are beginning to plant cocoa on old and unproductive cocoa farms even though they are aware that the second cycle will yield significantly less benefits in comparison to the first one.

Apart from the economic downturn which is approaching, farmers in Sefwi as elsewhere in what used to be the forest belt, have witnessed a rapid degradation of the environment and are increasingly voicing their concerns (cf. Amanor 1994). The soil fertility is said to be impoverished, particularly in deforested areas and on short fallow, with consequent reduced yields of all types of food crops and cocoa. This is matched by the unprecedented spread of invasive weeds and a consequent increase in farm maintenance labour. Termites and pests affecting both cash and food crops are now thought to be more widespread and destructive. Farmers note an altered, erratic and decreasing rainfall pattern. Rain does not follow its usual course, thereby leading to decreased humidity and excessive sunshine hampering crop development while showers in unneeded periods facilitate the spread of cocoa pests. Deforestation has also led to the decreased availability of non-timber forest products (firewood; mushrooms; medicinal plants; pestles; wood and canes for craft).

\(^1\) After repeated failures a ‘Modified Taungya System’ project was launched in 2002 with the aim of reforesting...
The depletion of game, snails and fishes has seriously affected dietary habits as the share of budget expenditure directed for the purchase of protein-rich food has soared in recent decades. The dwindling of streams during the dry season leads to an increased distance from settlements to water sources. The exhaustion of the forest cover, moreover, has led to an increased risk of bush fires and to widespread erosion on deforested land, especially within settlements. The lack of tree protection during potent thunderstorms, farmers’ lamentations continue, provokes devastation of houses in villages and of crops on farms.

The speed of degradation has not yet allowed for the development of local solutions for these environmental problems. While most customary norms regulating access to natural resources have no longer been applied over the last decades, these have not been replaced by new rules. One of the principal problems lies in the commercialisation and hence over-exploitation of forest resources for individual benefits disregarding the communities’ future needs. There is a general willingness to ameliorate the environmental situation through technological innovations and reforestation is seen by farmers as the most obvious choice. Farmers claim they would support tree planting along water bodies, bye-laws forbidding weeding on river banks, more systematic bush fires checks with sanctions for infringements. Such policies, which require collective action, have however not been implemented.

The timber option
Up to a few years ago forest policies in Ghana have simply ignored the most obvious solution to counter environmental degeneration: overcome the outdated and irrational separation between timber and agricultural titles and establish the farmers’ right to plant, maintain and own timber. The recognised custodians and managers of forest resources, the chiefs and the government’s forestry sector, have clearly failed to implement a sustainable and regulated use of forest products. A possible solution lies in the creation of forest resources by individuals on their own farms and the consequent ownership of timber by farmers. General reforestation would lead to obvious improvements: it would stabilise the rain pattern with beneficial effects on water sources, prevent the devastating effects of thunderstorms, minimise bush fires and, possibly stimulate the reproduction of fauna and of non-timber forest products. The Ghanaian forest belt could not only reflower in current cocoa growing areas but could also reclaim areas which were once forest and are now grassland.

What seems most important, however, is that while procuring collective relief from ecological distress, the timber option would be economically viable. In 2000 the market price of a 25 year old mahogany (Khaya ivorensis) or ofram tree (Terminalia superba) was estimated at around Euro 200 by timber firms. Taking into consideration a five by five meter spacing 400 trees could find room in one hectare of land. This would produce an income of Euro 80,000 over 25 years and an yearly income per every hectare cultivated of over Euro 3,000. A cocoa farmer rarely cashes half of that amount from a

47,000 hectares by 2006.

Colloque international “Les frontières de la question foncière – At the frontier of land issues”, Montpellier, 2006
one hectare cocoa plantation in full production. Timber, moreover, has the advantage - in sharp contrast to cocoa – that it does not have a fixed harvesting time and can therefore be fell when there is a convenient market price. Timber farmers, therefore, would not have to undergo the continuous price fluctuations that have troubled their cocoa enterprises over the last century. Timber farming requires little labour in comparison to cocoa and allows the development of collateral economic activities underneath the growing timber (bee-keeping, snail farming, planting of black pepper or yam, animal rearing). Reforestation would also open up new opportunities for the reproduction of the forest fauna both in protected buffer areas around National Parks and elsewhere were game could alleviate the growing demand for protein-rich food.

In December 2005 I visited one of the projects in the Sefwi Wiawso District in which I worked as a consultant three years back. The timber planted was alive and a good percentage was healthy. Timber seems to do exceptionally well in the district regardless of the particular agroforestry arrangement chosen by the farmer and - to a certain extent - of the soil quality. The project has shown farmers’ capacity to elaborate innovative agroforestry solutions. While farmers have been willing to experiment with timber planting they have also been cautious, integrating timber production with that of more ‘traditional’ crops. Timber seedlings are grown in plantations, mostly alongside food crops or vegetables; in small numbers in areas that are not completely covered by the canopy of mature cocoa farms; alongside palm; alongside old cocoa farms approaching their demise with timber saplings benefiting from the lack of invasive weeds. Timber lends itself for boundary demarcation providing long-term markers of land rights, thus replacing more fragile plants such as pineapples and flowers that are often removed giving rise to litigation. The length of timber maturation also appeals to those farmers who fear they may be evicted from the land as expulsion normally takes place after harvest. The timber option is proving to be flexible and adaptive. The success of the reforestation project is confirmed by the fact that - even though planting has greatly reduced since the free distribution of seedlings promoted by the project ended - some farmers have continued planting timber, purchasing their seedlings.

However, one of the problems with the timber option voiced by farmers concern the expenses and what one of them has termed its ‘gestation’. First, let us examine the costs of timber growing. For the first three years timber is grown alongside food crops; the weeding required on the food farm enables the timber to grow with no “extra” work. If timber is intercropped with oil palm or cocoa no “extra” labour is required as the tree will benefit from the weeding performed for the cash crops. The financial cost of timber growing (to employ the labourers who weed) is limited to plantations – that is timber planted in pure stands - from the moment food farming is abandoned up to the time when the tree canopy joins, leaving little light to reach the soil and thus reducing the growth of weeds. After the canopy closes, no further weeding is necessary until harvest. Some trees – like ofram – which grow fast and have abundant canopy require weeding between 3 to 6 years from planting; others - like edinam - grow slower and require weeding for longer period.
The second set back is the absence of short-term benefits. The fastest growing timber species take around twenty years to reach maturity and others more than half a century. When advised to plant timber, several elderly farmers responded that they will probably be dead before the tree can be fell. Some younger farmers consider growing timber – Ruf (1998: 18) pointed out - a “retirement capital”, but others face the need for short-term cash which directs them towards less profitable but more immediate benefits. The time-gap between investment (planting and weeding) and profit (harvest) could be shortened if timber firms invested on timber farming by providing small yearly amount for the maintenance work performed by farmers (probably 30 cents of Euro per tree per year would be sufficient). These payments could be intended either as loans or as purchases of part of the timber’s value. On a loan scheme, the farmer could pay at harvest – with interests – the money received. As a form of gradual purchase of the timber, payments would be part of an agreement between firms and farmers to the effect that in exchange of the payment of the yearly maintenance fee the firm acquires the joint ownership of the timber, having the right to purchase the remaining half at harvest at the prevailing market price. A speculative calculation with respect to a mahogany tree shows that this would be a profitable investment: the investor would pay a total of Euro 12.50 over 25 years in exchange for half of the estimated Euro 200 value of the timber.

From the Ghanaian government’s perspective, such long-term investment would also guarantee that timber businesses do not simply close down and leave the country once they have finished exploiting existing resources. Recent legislation (Act 547, section 8) requires firms that apply for timber rights to undertake ‘a reforestation plan during the period of the contract to the satisfaction of the Chief Conservator of Forests’. In the last years loggers have carried out reforestation programs but mostly on reserves and in most instances neither the farmers who clear and plant the trees, nor the timber firms own the trees as these belong to the Ghanaian government. Unsurprisingly such reforestation schemes respect legislation but are largely unsuccessful. The money often squandered in such formal exercises could be pocketed by farmers who demonstrate the capacity to grow and care for timber instead. The yearly maintenance fee would guarantee farmers an additional yearly revenue of no negligible size and a bulk revenue at harvest. By adopting this co-ownership agreement policy, the logging industry would not only guarantee the renovation of timber off-reserves in their areas of operations - a crucial condition for its very survival -, it would also purchase trees at a reduced cost.

The potential effects of the timber option are almost hard to imagine. The exercise could lead to an ecological recuperation and an economic revolution by creating new and valuable resources in an area that desperately needs a sustainable vision for the future. Timber farming might however, despite its potential, remain a dream. Farmers are planting trees only in a few areas where NGOs are trying to show the benefits of the new timber option and even here acceptance is often lukewarm. But why are farmers not planting timber? An essential condition for the spread of the timber option is the farmers’ ownership of the trees they plant and maintain and, up to now, legislation has not provided the required timber tenurial security.
Ambiguous legislation

Act 547 ‘The Timber Resources Management Act, 1997’, the consequent Legislative Instrument 1649, the ‘Timber Resources Management Regulations, 1998’ and the ‘Timber Resources Management (Amendment) Act, 2002’ have recently transformed the legislation governing the timber industry by introducing new regulations concerning the granting of timber rights. In Ghana there is a widespread understanding of these laws as granting the ownership of the timber to the one who plants it. This is stated by academics, some timber firms and lawyers as well as officers of the Forestry Services Division. However the act in itself, the legislative instrument and the amendment are highly ambiguous. The devastating paradox of the Ghanaian dual economic system has not yet been solved. Up to date there is no clear and definite indication that farm owners may plant and own timber trees.

For the development of the timber option the relevant passage of Act 547 is section four, subsection (3), which was amended by Act 617. This states that the government shall not grant timber rights with respect to ‘land with private forest plantations; land with any timber grown or owned by any individual or group of individuals’. The land on which farmers plant their timber will therefore not be allocated by the government to logging firms, this suggests that the government does not claim any interest in the timber concerned. It is unclear, however, if tree growers are recognised the ownership of the timber regardless of the status of their land rights. In some parts - the Legislative Instrument, sections 3 to 7 – the law associates timber ownership with land ownership.

The problems timber planters will have to face became apparent in the application of the Forest Plantation Development Fund, established through legislation in 2000. The scheme establishes loans for timber planters trying to address the problem of lack of short-term financial benefits. The process of loan distribution exposes the beaurocratic logic of the state. Farmers are required to move to offices in the capital, back at a district level, then at a regional capital with the hope – but no certainty - of receiving a loan for an amount that invariably is much smaller than that expected. Moreover very few of the farmers – the wealthiest - who have planted timber (around 2% of project beneficiaries) have managed to obtain loans. The documents required to obtain a loan on the plantation include a statuary declaration and a site plan. The standard cost for the statuary declaration is 120,000 Cedis (around 11 Euro) to be paid to the Commissioner for Oaths. The site plan costs 600,000 Cedis (56 Euro) paid to the surveyor plus an additional 400,000 (38 Euro) for it to be endorsed by the chief with his signature. No loans are given for plantations under 5 acres and to farmers who intercropped with cocoa or palm oil. The granting of loans is the first direct government intervention on timber farming: the land rights documentation required was costly and the beaurocratic procedure lenghty, tiresome and inaccessible to small farmers.

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The documents required to obtain the loan seem to indicate that farmers are recognised the ownership of trees but this is not stated clearly. If tree ownership is subordinated to land ownership rather than to farm ownership, the control of timber by farmers would be virtually impossible. The issue of land ownership in Ghana has a long and disputed history: land rights are not reducible to a European notion of ownership but rather held by a series of overlapping parties (the government, chiefs, farmers) who hold different prerogatives (over farm products, minerals, timber). The proclaimed individualisation of land rights (Quisumbing and Otsuka 2001) is not reflected in complex practices of negotiation over titles involving several stake-holders. While the land ownership debate is ongoing, what seems clear is that most farmers are not recognised as land owners (Kasanga 1988, Woodman 1996). If timber ownership is reserved to land owners, farmers will simply not regenerate forest resources off-reserve in southern Ghana and they are the only ones who can realistically be expected to carry out a successful reforestation. The farmers’ ownership of the timber planted is an absolute necessity for the success of reforestation schemes. Farmers are not ready to plant and maintain trees they do not fully and securely own. Even though this legislation may be interpreted in different ways, it does not seem to indicate, contrary to general opinion, that the farmer who plants the tree necessarily acquires full ownership. Unsurprisingly the Forestry Services Division is not complying with farmers’ demands to provide certification of ownership for the timber they are planting.

In two decades, when the timber that is now growing reaches maturity, the most likely policy option is that tree growers will be asked to reach an agreement with chiefs, constitutionally recognised as the office holders in which land is vested. Traditional rulers will probably tax timber farming but to an extent that has yet to be determined. Moreover, the law, and specifically Act 547, section 14, does not specify if the government will fix the price of timber or if this will be left to a market deal between timber owner and timber firm. In short, while it is likely that chiefs and the government will draw a share of the wealth produced by farmers it is unclear the size of the levy. The tribute payable to chiefs generates a further question left unanswered by the legislation, that is whether immigrant tenants have the same right of the indigenous farmers. In the Sefwi area while indigenous ‘citizens’ had the right to clear any portion of virgin forest and acquire agricultural rights over this area, but since the 1940s immigrants have had to purchase their agricultural rights. The tenurial rights of immigrant farmers are particularly ambiguous (Boni 2005b). They were granted the ‘bona fide property’ up to the early 1960s, but the status of their prerogatives was gradually decreased and, by the 1990s, they were recognised no more than the ‘peaceful and uninterrupted use and occupation of the land’. Immigrants’ rights were sanctioned by agreements that consistently confirmed farmers’ rights to plant and own cocoa, palm and food crops. Foreign farmers, however, have been explicitly denied any right over

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3 One of the major sources of income for the Ghanaian government has derived from the fixing of cocoa prices: farmers need to sell their cocoa at a much lower price than that offered by the market, the difference being cashed by the government.
timber or – as contracts of the 1950s phrased the issue – they ‘have no concern or access to timber trees’. Similar clauses are included in all the different agreements drafted over the years. Timber was considered - and actually was up to the late 1990s - an asset generated spontaneously from the land, independently from the farmer’s work, and therefore belonged to the ultimate landowners, the chiefs and the government (Boni 2005a). Now immigrant farmers are planting timber alongside their crops and one would expect their work on these trees to provide them with the same rights they have over crops. Legislation is, however, regrettably silent on tenant farmers’ timber rights and in areas such as Sefwi where they make up about half of the farming population, this tenurial insecurity precludes the full development of the timber option. In short, the current legislation lacks a clear statement to the effect that any one who plants a tree on his/her farm acquires the *bona fide* property and the right to sell this through market negotiation.

The timber option is plagued by ambiguous legislation and tenurial insecurity. Farmers have an interest in planting trees, they see the environmental need for reforestation and its financial sustainability but, at present, are not provided with the necessary legal conditions. Some farmers take the risk, plant and maintain timber as they believe they will cash part of the wealth produced but many are understandably sceptical and are waiting to witness the fate of these pioneers.

**Conclusion**

Ruf (2001) has held that cocoa farming, after leading to massive deforestation, creates the need for reforestation with the subsequent elaboration of appropriate technological innovation. This is the stage reached in southern Ghana which makes reforestation efforts closely resemble a dream development project. It is not only ecologically sustainable, but also recreates the lost ‘natural’ balance of sustainability. It would have beneficial effects on the flora and the fauna and would regenerate the environment needed for the preservation of forest biodiversity. It is not selective: any person holding farming rights – over big or large farms - can resort to the timber option. It is adaptive - farmers can select their own ways of combining timber and farming – and requires little additional labour. It could lead to a stabilisation of uncertain tenurial rights. The project can be managed through indigenous resources (timber wildlings are available in forest reserves) and would not only involve but also stimulate the production of innovative local knowledge. The regeneration of a broad forest cover would put Ghana at the forefront of environmentally friendly countries and on a moral high ground. The Ghanaian government could boast its reforestation schemes and probably reap some financial benefits at international negotiating tables.

The timber option is an opportunity that can develop entirely within Ghana and up to now the constraints that have impeded its development have also come from within the country. Recent legislation has unveiled the broad gap between legislators’ intended aims and the effects of these laws on farming communities. An inefficient loan scheme and tenurial uncertainty have crippled the development of the timber option and may, in future, bring it to a complete halt. Clear regulations, on
the other hand, could put the acclaimed entrepreneurship of Ghanaian farmers to the test at the centenary of cocoa boom (Hill 1963). It is up to the government and local chiefs to give them this opportunity, by choosing to reverse a century of predatory economics in favour of a sustainable future.
References Cited


