The Forestry Sector in Côte D'Ivoire: Current Status and Policy Implications

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Introduction

For practitioners and others involved in international forestry, it is important to understand current forest related issues and dynamics in producing regions of the world. Media and researchers have often sounded the alarm that the health of Amazonian forests is linked to the survival of human kind (Wagner et al. 1993). This same view is rarely expressed for other developing countries where the tropical forest plays a vital role in economic development. One such country is Côte d'Ivoire in sub-Sahara Africa.

The purpose of this paper is to discuss Côte d'Ivoire in the context of its forest resources, and forest related relationships to economic development. Cote d'Ivoire has lost almost 83 percent of the 16 million hectares of tropical forests that existed in 1960 (Gome 1996). Many forest related problems currently impact development in this country. For example, rapid deforestation is an acute problem that affects the daily lives of Ivorians. Although some corrective actions such as halting illicit harvesting, reforestation and reforming logging activities have been taken by the government, expansion of agricultural lands at the expense of forests remain the fundamental contributor to deforestation in Côte d'Ivoire. Other factors include a high natural rate of population growth (3.9 percent annually) and flexible immigration policies which create land use pressures.

Unfortunately government corrective actions have not addressed the fundamental factors leading to forest depletion. In essence, the government has transitioned from a policy of offering harvesting concessions, to an interim policy of timber export quotas, to an outright total ban of timber exports. These policies did not serve to aggressively combat forest depletion and stimulate sustainable forest management and wood products production. They simply shifted export products from logs to semi finished products. The conversion from sustainable utilization of forests to unsustainable agricultural cultivation has produced only short-term productivity gains at the expense of long-term socio-economic benefits (African Development Bank 1990). The reason that the government of Cote d'Ivoire has promoted utilization of land for the production of food and cash crops is for short-term benefits which is part of an overall strategy of reducing the national debt.

The continuous destruction of forestlands is one of the most unfortunate and dramatic events in Cote d'Ivoire. Currently, Cote d'Ivoire is losing 450,000 hectares of its tropical forests annually (Gome 1996). Although tropical forest ecosystems are often viewed only as a source of commercial timber and fuelwood, they play a much larger and significant social and economic role in rural as well as in urban and national economies. In addition, forests protect rivers, lakes and dams from siltation, as well as counteract soil erosion and influence rainfall (African Development Bank 1990).

The future development of Cote d'Ivoire will require strategies that respond to forest resources depletion challenges and that counteract unsustainable economic development. Such strategies must encourage the management of demographic pressures, implement intensive methods of agricultural production, develop alternatives to fuelwood and combat poverty (African Development Bank 1990). Considering the importance of forest resource issues, an integrated approach using inclusive policy dialogue should be encouraged.

Forest Resource Degradation in Sub-Sahara Africa

Depletion of the world's rainforest and accompanying environmental degradation have been global issues since the middle of the 20th century. Saving the remaining forests in both tropical and temperate areas has become an important priority of the world community (Rajagopalan 1992). Lead agencies in research and development include the Food and

Agriculture Organization (FAO) of the United Nations, the World Bank, and the International Tropical Timber Organization (ITTO).

Most sub-Saharan African countries have regulations and administrative structures for the forestry sector within which forest management is implemented. However, often these laws are out of date and are neither enforced nor enforceable (FAO 1997). During the pre-1960's colonial period, local people's rights and indigenous management systems in forest producing countries in Africa were ignored with property rights often forcibly relinquished. Some countries, upon gaining independence, immediately transferred government forestlands to farmers. Although in many countries reserves still exist which contain protected forests, a legacy of antagonism between forestry officials and local communities tends to persist and remains a serious obstacle to forest management (FAO 1997).

In the 1960's, sub-Saharan Africa had one of the world's largest rainforests (Lofchies et al. 1981). Today however, Africa accounts for only 27 percent of the world forest area (Sedjo et al. 1984). Three decades after African independence was won, forestlands are being rapidly harvested for both extensive cultivation of cash crops and food production. This situation is creating great concern about the depletion and degradation of forest cover in tropical Africa and resulting serious problems such as deforestation, soil erosion, desertification and loss of genetic diversity of flora and fauna (Darkoh 1993).

Widespread environmental degradation in sub-Saharan Africa is largely attributed to the absence of environmental awareness or consciousness among the poor indigenous populations in Africa (Plumpwood 1982). However, the foremost cause is the rapid growth in human population that in turn leads to over-exploitation and poor management of African natural resources through over-cultivation, overgrazing, poor irrigation practices, pollution, etc. (Darkoh 1993). Negative human and livestock population pressures will persist if new sustainable forest utilization techniques are not adapted.

The consequences of poor resource management are manifested differently in different African countries. For example in Côte d'Ivoire, legal property rights are recognized once land has been clear cut and cultivated, while in post-Apartheid South Africa, land ownership can be justified by those who can economically invest in forestland in order to help support national economic growth. Regardless of the variation, the impacts will eventually be measured in negative economic and social terms (Brown 1988). This can be illustrated by the fact that the demand for household fuel poses a clear threat to economic development in most sub-Saharan African countries such as Mali, Burkina Faso, Chad, Malawi, and Niger. It has also led to denuded forests near rural villages and around towns and cities (Darkoh 1993). Presently, fuelwood shortages affect more than 30 countries in sub-Saharan Africa. Commercial harvesting for lumber, land clearing to make way for food and cattle farms, and the peasant use of the forest for fuel and fodder all threaten the remaining natural forests; forests which, in tropical climates, are highly susceptible to damage from human activities (FAO 1997).

The Forest Situation

The Ivorian forest was originally a natural rain forest, with forest regeneration accounting for only 2 percent of total forest area in the 1990s (National Trade Data Bank 1996). Plantation forestry started in 1935 under the colonial administration. It was not until the creation of La Societe pour le Development des Plantations Forestieres (SODEFOR), a government forest development agency, in 1966 that forest planting and management activities were fully established by the government (National Trade Data Bank 1996).

Before the establishment of SODEFOR, the total forest planted was 10,000 hectares annually. This increased to 83,000 hectares by the end of 1993. Virgin forest currently accounts for less than 20 percent of the total forest area due to an extended period of exploitation of the forest for agriculture and timber (National Trade Data Bank 1996). Expansion of agricultural lands from 3.1 million hectares in 1965 to well over 7 million hectares in 1990 has resulted in a significant increase in the rate of deforestation (Borota 1991). Thus, between 1977 and 1987, Côte d'Ivoire lost 42 percent of its forest and woodland, the highest loss by far in the world. The same figures for neighboring Ghana and Liberia, were 8 percent and 1 percent, respectively, and for Brazil, 4 percent. It is projected that by the end of the century, at current rates of deforestation, Côte d'Ivoire will have lost 83 percent of its virgin forest (Borota 1991).

Côte d'Ivoire currently has 253 major forest areas including 8 National Parks with a total area of 1,742 hectares, 5 reserves of fauna and flora which have a total area of about 248,000 hectares and 240 classified forests which have an area of about 3.6 million hectares (Agbatou 1997)

To be able to manage harvesting operations, the government has granted licenses to logging companies to operate in the classified forests. A classified forest is defined as used only for forestry and not for agriculture. The classifie d forests comprise various concessions ranging from 2,500 hectares to 25,000 hectares that are called "Perimetres". They are assigned to approved logging companies for a period of 5 to 30 years according to the financial strength of the logging company.

The total logging area in classified forests is currently estimated to be 2.9 million hectares, of which 1.6 million hectares is in the south and 1.3 million hectares are in the savanna area in northern Cote d'Ivoire. The major forest stands are located in the south, the west and the southwest forest zones (National Trade Data Bank 1996). Since February 1992, the classified forest was brought under the sole management of SODEFOR (National Trade Data Bank 1996).

Causes and Problems of Deforestation

In Côte d'Ivoire, deforestation is seen as a severe environmental problem. The main reasons are expansion of agricultural land, flexible immigration policies, a high natural rate of population growth, centralized government policies with highly unequal political and financial powers and a lack of well-defined property rights. Under colonial rule in the 1960s, French policies encouraged Africans to produce agricultural commodities including wood products. Even today, with an independent Africa, the same colonial philosophy prevails. Africa, and in particular Côte d'Ivoire, produces more agricultural commodity crops for export than they grow to feed themselves. As a consequence, slash-and-burn-farming practices to expand agricultural lands have been one of the primary causes of the high rate of deforestation in Cote d'Ivoire.

The forest products export industry that once fueled the economy of Côte d'Ivoire has almost disappeared. In the 1960s and 1970s, Côte d'Ivoire enjoyed a phenomenal economic expansion as its rich tropical hardwood forests yielded export earnings of $300 million a year (Borota 1991). But, as is the case in many developing countries that do not practice sustainable forestry, forests were decimated and exports dropped to $30 million annually in the early 90s. The loss of this major source of employment and export earnings, coupled with falling cocoa prices, led to a steady decline of the economy. From 1980 to 1994, per capita income fell by 50 percent (Borota 1991)

In 1992, the government, in order to stop or slowdown further encroachment on the forest, set up a commission. Known as "paysan-forest" at various classified forest zones

since 1992, the primary objective is to educate farmers with regard to the need to preserve the forest and to better understand the effects of their activities on the forest (National Trade Data Bank 1996). As a result, farmers already using the classified forests will be allowed to do so if they are willing to cooperate with the government. In exchange for their activities in the classified forest, farmers must undertake tree planting to offset what has been cut. In this regard, social groups such as wood professionals, SODEFOR and forest policymakers have full responsibility to supply management input and to monitor compliance.

Forests and Rural Development

Since the independence of Côte d'Ivoire, economic growth has largely bypassed the rural population as their incomes and opportunities still remain at abysmally low levels. A vast majority of the rural population is living today with limited means of satisfying their most basic needs. Thus, more than 80 percent of the people in Côte d'Ivoire live in conditions of poverty (Brown 1988).

Economic expansion has failed to benefit many Ivorians because economic development strategies have concentrated exclusively on promoting the growth of total output and ignoring the adverse effects (such as deforestation, erosion and debts that the country has incurred) of such expansion. In the past, it was assumed that traditional policies would eventually improve the position of the underprivileged relative to the upper classes. Unfortunately only a privileged few urban-industrial "islands" (about 1 percent of the total population) benefited.

The indigenous population has tended to be discriminated against by the elite, middle and upper classes as well as policymakers who are often influenced by pressures from organized and vocal non-rural groups. Thus, "the disparate distribution of natural resources, income, political power and opportunities has left the poor rural people alienated from the mainstream of society" (Schmink 1987). The concept of development discussed above, such as promoting the growth of total output and ignoring the effects, is progressively being replaced by a new concept of development that integrates both economic growth and social objectives.

The creation of SODEFOR in 1966 brought a new approach to forest development as a realistic forest planting activity with forestry strategies geared toward inclusive objectives (National Trade Data Bank 1996). Tropical high forests are being converted to be more productive perennial tree crops (oil palm, coconut, cocoa and rubber). As a result, "a quantifiable increase in rural incomes has been achieved and the farmers involved have improved their earning power, compared with their former dependence on shifting cultivation" (Spears 1981). The 100,000 hectares of perennial tree crops today provide an effective catchment cover, and the productivity of the land has also been enhanced. As a result, economic rates of return have been more attractive than originally anticipated. This has had a beneficial impact on rural incomes, but at a modest level by comparison with agricultural projects. Today, the forestry plantation scheme employs about 5 families per square kilometer, compared with 2 families per square kilometer for forestland under shifting cultivation, about 30 families per square kilometer for oil palm, rubber or coconuts grown under plantation conditions, and 50 families per square kilometer for smallholder agricultural commodity crops production (Spears 1981).

Timber Production

The production of timber was one time of major importance to the Ivorian economy. In 1993, total Ivorian exports were $2.7 billion. Tropical wood products accounted for 11 percent (or $297 million) of export revenue, falling behind cocoa at 30 percent (or $810

million) and coffee at 20 percent ($540 million). The most important export timber species are acajou (Khaya Ivorensis), iroko (Chlorophora excelsa), sipo (Entandrophragma utile), bahia (Hellea Ciliata), and makore (Dumoria). Nearly thirteen million cubic meters (13 billion bd. ft.) of logs were produced for export annually in the late 1980s and early 1990s.

It is important to note that the indigenous Ivorian timber species are all hardwoods and natural forests are mixed stands of wide variety of species. Plantation forests account for only 20 percent of mixed stands. Major species being planted are teak (Tectona grandis), frake (Terminalia superba), samba (Triplochiton scleroxylon), pine (Pinus spp.), cedar (Juniperus procera), gmelina (Gmelina arborea), niangon (Tarrietia utilis) and framire (Terminalia Ivorensis).

The area under SODEFOR management in 1993 was 2.6 million hectares from a project total area of 3.6 million hectares, consisting of 3.5 million hectares of classified forests and 93,000 hectares of plantation forests (National Trade Data Bank 1996).

The government's main goal is to have a permanent forest zone maintained at 20 percent of total forest area by 2015, about 6.4 million hectares, up from the current level of 14 percent or 4.5 million hectares. If successful, the forest ecological equilibrium of the country is projected to be maintained at a sustained production of 4 million cubic meters of timber annually (National Trade Data Bank 1996).

Côte d'Ivoire Wood Products Production and Commercialization

Côte d'Ivoire is traditionally known as one of the African "woodbaskets" because it is well endowed in utilizable timber and often supplies both domestic and international markets. Thus forest products flow from Côte d'Ivoire where production exceeds domestic consumption ("surplus country") to where production falls short of domestic consumption ("deficit regions"). These flows are often controlled by the microenvironment including market factors and a wide range of trade restrictions. Over the period of 1981-1996, forest products trade annual revenue averaged $US 313 million. In 1990, Côte d'Ivoire earned nearly $414 million, the highest revenue earned in this sixteen year period.. Côte d'Ivoire exports wood products such as roundwood, plywood and sawnwood representing about 11 percent of the total export revenue for the country. This section offers a brief overview of wood products production, consumption and export trends for selected products.

Roundwood Production and Domestic Consumption

Côte d'Ivoire is a net exporter of roundwood although less so in recent years. Côte d'Ivoire ranks second only to Malaysia in trade of roundwood among the tropical wood producing countries (Laarman and Sedjo 1992). Domestic consumption of roundwood has steadily increased from 81 percent of production in 1981 to reach a high of 98 percent of production in 1995 and 1996.

Hardwood Log Exports

Ivorian hardwood logs are exported to three main regions of the world, the European Union, Asia and Africa. Among all three regions, the European Union with 62 percent of the market share remains the main trading partner of Côte d'Ivoire in hardwood logs. The European market is traditionally well known for its attraction of African valuable hardwoods. In 1994, Côte d'Ivoire exported a total of 233,526 cubic meters to the European Union. Spain had 45 percent of the market share, followed by France with 30 percent, Italy with 14 percent, and Portugal, 11 percent.

A total of 91,361 Cubic meters of hardwood logs were exported in Asia in 1994. Thailand and India dominate Ivorian hardwood logs exports to Asia with 74 percent of market share in 1994. China and Japan captured 14 percent and 12 percent of market share, respectively in the same year.

In 1994 a total of 26,511 cubic meters of hardwood logs from Côte d'Ivoire were exported to Africa: Senegal had 65 percent of the market share followed by Tunisia with 35 percent. Data indicate that Senegal is the main hardwood log-trading partner of Côte d'Ivoire in Africa.

Plywood Production and Domestic Consumption

Between 1981 and 1988, production increased to 53 thousand cubic meters before declining to 39 thousand cubic meters in 1992. From 1994 to 1995 production increased 41 percent to 58 thousand cubic meters. Consumption increased 208 percent over the 1981-1996 time period and went from 52 percent of production in 1981 to 70 percent of production in 1996. Overall, Côte d'Ivoire has been a net plywood exporter although the country imported 2 thousand cubic meters in 1993.

Sawnwood Production and Consumption

Between 1981 and 1996, sawnwood production has been virtually flat. On the other hand, domestic consumption declined from 1981 to 1993 before beginning an increase that continued through 1996. Consumption as a percent of production has declined dramatically from 56 percent in 1981 to 9 percent in 1993. Conversely, exports have steadily increased to reach 696 thousand cubic meters , or 72 percent of production, in 1996.

Fuelwood Consumption

Côte d'Ivoire does not export or import fuelwood and charcoal with a sufficient supply for domestic energy needs. Over the 1991-1996 period, consumption has increased linearly to 12 thousand cubic meters in 1996.

Summary

Côte d'Ivoire is a sub-Saharan African country that has experienced a significant reorientation of its forest-based sector over the past half-century. Once rich in forest resources, the country has seen a dramatic rates of deforestation over this time period. One of the most efficient ways to reduce the deforestation rate in Côte d'Ivoire is to attack the fundamental causes of the problem. The foremost problems are an extensive increase in the agricultural land base, rural poverty, a high natural rate growth of the population and immigration legislation.

Forest related policies in place are theoretically sound and realizable, but they must be communicated effectively to all stakeholders. Legislation measures and instruments should encourage the inclusion of the general public, indigenous people, landowners, industry representatives and other land users.

One of the most important characteristics of sustainable forest management, is the development of technical and multidisciplinary skills and quality of human resources (Report of United Nations Conference On Environment And Development 1992). Political and economic structures must be decentralized to attract and "ensure a rational and holistic approach to the sustainable and environmentally sound" forest management in Côte d'Ivoire.

Economic development must integrate both economic growth and social objectives. Only appropriate sustainable forest management practices will guarantee the maintenance or

growth of forestland that in turn will provide sustainable wood products production base to improve living conditions of people in Côte d'Ivoire.

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