

Assessing the Impact of Forest Policies and Strategies on Promoting the Development of Non-Timber Forest Products in Ghana

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ABSTRACT Non-timber forest products (NTFPs) farming is emerging globally as an important tool for establishing sustainable forest communities and supporting forest-based livelihoods. NTFPs are of great importance to millions of people whose livelihoods largely depend on them. Increasingly, forest policies of many countries are being revised to reflect the potential of NTFPs in achieving rural development and poverty alleviation. In Ghana, various forest policies have been formulated and implemented for developing a national forest estate and timber industry. However, most of the forest policies have failed to address the role of NTFPs in achieving poverty reduction in the country. Forest policies continue to remain a major hurdle to the growth and development of NTFP in Ghana. Through an exhaustive literature review, interviews conducted on various forest development stakeholders, forestry experts and forest dependent communities, this paper uses sustainability frameworks to critically evaluate Ghana's forestry policies and their impacts on NTFPs utilisation and management in Ghana. The 1994 Forest and Wildlife Policy (FWP-94) and its implementation process from 1995 to 2008 were analyzed with regard to the development of NTFPs and a number of challenges facing this sub-sector identified. The results revealed that the lack of definite policy on NTFPs has impacted negatively on their promotion and development in the country. Until recently, most of the policy initiatives were aimed at forest conservation and timber production; the livelihood opportunities of NTFPs for local communities were ignored. The paper also urges government of Ghana to effectively place development and promotion of NTFPs farming as core element of the country's forestry policy-making process and national development agenda.

1. INTRODUCTION

Non-timber forest products (NTFPs) farming is emerging globally as an important tool for establishing sustainable forest communities and supporting forest-based livelihoods (FAO 1995b; Arnold and Townson 1998; Cavendish 2000; Marshall 2003; UNDP 2004; Ahenkan and Boon 2008). NTFPs provide foundation for the development of the livelihoods of forest dependent communities. They foster natural resource conservation and ecosystem services (Ruiz Pérez et al. 2005; Kamaljit et al. 2007; Shahbaz et al. 2007; IUCN 2008). An estimated 80% of the developing world population heavily relies on NTFPs for their primary livelihoods (FAO 1997; Shackleton and Shackleton 2004; Ahenkan and Boon 2008; Mbuvi and Boon 2008). They are important in the socio-economic, ecological, and cultural development in tropical countries (Mbuvi and Boon 2008). In the face of ecological challenges such as climate change and economic pressures, effective policy for the development and promotion of NTFPs farming will significantly help forest dependent communities to diversify their economies and soften the impacts of the current challenges affecting the forestry sector (Boon and Ahenkan 2008;

Kalame et al. 2008; Kunwar et al. 2009). NTFPs are frequently the primary motivating factors for local participation in forest management.

Despite this potential role of NTFPs in livelihood improvement and biodiversity conservation, the legal and regulatory framework for their development in most developing countries has received little attention (FAO 1995b; Aboagye et al. 2007; Wynberg and Laird 2007; Ahenkan and Boon 2008; IUCN 2008). In most developing countries, the forest policies still categorize NTFPs as "minor" forest products, resulting in less emphasis on these products than upon timber within forest management programmes and policies (Morris and Bay 2002; Gautam and Devoe 2006). This disparity between local importance and policy emphasis underscores contrasting valuation of NTFPs between policy makers and local people. In most countries, the use of forest policies to guide the utilisation, management and development of NTFPs is relatively new; timber production is often accorded priority. Much attention in forest and development research has centred on the commercial productivity of timber and less on the actual and potential role of the multiple products and environmental services offered by forests (Perez and Byron 1999). FOA (1995)

notes that lack of clear policy and other institutional hurdles impede the development and promotion of NTFPs. Increasingly, forest policies of many countries in recent years are being revised to address NTFPs in rural development and poverty alleviation (Dupar and Badenoch 2002; Larson 2002). Hence, forestry has become an instrument of policy rather than an object of policy. Shahbaz et al. (2007) note that the new trend in shaping forest policies has a potential to maintain a balance among four pillars of sustainable development and secure sustainable livelihood for forest dependent communities.

1.1 Research Problem, Objectives and Assumptions

Like in many developing countries, in Ghana forest policy as it relates to NTFPs has historically been absent and overlooked. In the formulation of forest policies, forests have been perceived primarily in terms of their timber potential. The potential role of NTFPs in poverty reduction and forest resources conservation has not been considered. Over the years, forest policies have been dictated by the economic priorities of the government for exploitation of timber resources for revenue generation. The recognition of the importance of NTFPs for rural development and the consequent need for policies to guide their use, management and development is relatively recent in Ghana (Ahenkan and Boon 2008). Though several studies have explored the importance of NTFPs in livelihood improvement in Ghana, the effects of forest policies on the development and promotion of NTFPs in the country has not been investigated. NTFPs inventories by the Forestry Commission of Ghana also focused only on rattans, climbers and other minor tree species. The Ghana Poverty Reduction Strategy Paper (GPRSP) also failed to consider NTFPs and their nutritional and health linkages. Applying sustainability frameworks and SWOT analysis, this paper critically evaluates Ghana's forestry policies and their impacts on NTFPs utilisation, development and management in the country. The 1994 Forest and Wildlife Policy and its implementation process from 1995 to 2008 are analyzed with regard to the development of NTFPs, a number of challenges facing this sub-sector

identified and appropriate strategies recommended for their redress. The paper also examines the role of NTFPs policy in poverty reduction, improving livelihoods and leveraging sustainable rural development.

2. DEFINITION OF NTFPS

NTFPs have proved to be difficult to define due to some of the blurred boundaries between timber and non-timber products as well as the underlying difficulty in defining a forest. Consequently, the term "NTFPs" has generated a lot of *controversy* over its meaning (Shiva et al. 2002). The debate has raged over its definition since the term was coined in 1989 (Neumann and Hirsch 2000; Jean-Laurent Pfund et al. 2002; Belcher et al. 2005). There is, therefore, no universally accepted definition of NTFPs. This is also due to the fact that the study of non-timber forest products has been dealt with by people from varied fields of study such as forestry, ethnobiology, economic botany, social development, natural resource economics, conservation biology, protected area management, agro-forestry, marketing, commercial development, ecological anthropology, cultural geography and human ecology (Bih 2008). This has led to much discussion and no agreement on universally acceptable terminology to describe products (Wong 2000; Bih 2008).

Various NTFPs definitions proposed in literature tend to expound on specific species, aspects and products in line with different authors' focal interests (FAO 1995a; Morris and Bay 2002; Mbuvi and Boon 2008). The term NTFPs has been used interchangeably with terms such as "non-wood forest products", "minor forest products", and "hidden harvest" (Falconer 1994; Angelsen and Wunder 2003; FAO 2006). However, there is an overabundance of terminologies in use with single terms having a range of interpretations, none of which are universally recognized. The confusion over the definition and scope of 'NTFP' continues and there is no standard definition. Even the terms 'forest' and 'product' are debatable (FAO 2001). The lack of common definitions, terminologies as well as the multiplicity of interest have been seen as hindrances to the development of research on products considered as NTFPs (FAO 2001). Nevertheless, several attempts have been made by different authors

and international institutions to find an “acceptable norm” for defining NTFPs (Shiva et al. 2002). For the purposes of this paper, NTFPs is defined as “biological resources of plant and animal origin, harvested from natural forests, manmade plantations, wooded land, farmlands, trees outside forests and or domesticated” (FAO 1995; Peters 1996; Wong 2000; Marshall et al. 2005; Ahenkan and Boon 2008; Mbuvi and Boon 2008).

2.1 Significance of NTFPs in the Ghanaian Economy

NTFPs play an important role in the Ghanaian economy by way of supporting rural livelihoods. They contribute significantly to the income and food security of many rural households in Ghana (Falconer 1994; FAO 2001; Ahenkan and Boon 2008). Aggregate employment generation in forest product activities in Ghana is estimated to be growing at 6.9 percent per year (FAO 2003). These products contribute significantly to household food security, nutrition, health, and income, especially during the lean seasons (Ahenkan and Boon 2008). A considerable amount of food and medicinal plants are gathered from the forest. It is estimated that 20 percent of the economically active population derive income from NTFPs and 38% of households in Ghana trade NTFPs (Townson 1995). In a similar study covering households in villages around the large market centre of Kumasi, Falconer (1994) found that 68% of the households surveyed were involved in supplying NTFPs to the market. Among persons generating some income from forest products activities in households surveyed in southern Ghana, 72% identified this income as being important either in absolute terms, or in meeting particular needs, or because of its timing (Townson 1995). NTFPs are also used by people in Ghana to cure various diseases (Abbiw 1990; Ahenkan and Boon 2008). Rural people especially depend very much on traditional medicinal sources for their health. Falconer (1992) and Abbiw (1990) have tabulated different medicinal plants and animal products used to cure various diseases in Ghana. Trade and use of plant products have assumed a wider dimension with more plant medicinal products being traded on the local markets in Ghana.

3. POLICY AND FOREST POLICY

Ellefson (1992) cited in Fraser (2002) defines policy as “a general agreed-to and purposeful course of action that has important consequences for a large number of the people and for a significant number and magnitude of resources”. Policy involves direction, agreement, important consequences, significant analysis, multiple cases, actions and inactions. The term “*forest policy*” is used in many different contexts, from a general statement of the overall aim, goals or general objective of forest resource management for a country, to a fairly detailed prescription of a course of action with specific objectives for a rather narrowly defined field (Fraser 2002; Shahbaz et al. 2007). In some countries, there is no formal statement of forest policy, but policy issues are dealt with in an ad hoc manner, with some elements being incorporated into laws and regulations, and others being enunciated in ministerial statements (Fraser 2002). Following the Rio conference in 1992 many countries have seen revising their forest policies to address the livelihoods of the poor. Prior to this, many countries had general and idealistic goals and forest policy statements that had been in force for a prolong period of time (Fraser 2002).

3.1 International Policy on NTFPs

Although, NTFPs have been on the agenda of international development policy discussion in recent years, especially at the *International Forum on Forests (IFF)*, successor to the *International Panel on Forests (IPF)*, and the *Convention on Biodiversity*, there is no effective international policy on NTFPs due to lack of an effective and interactive stakeholder dialogue needed to develop broad-ranging issues and concerns emerging in NTFP policy and management debates around the world (FAO 1995; McLain et al. 2004). Dewees and Scherr (1996) provide a comprehensive review of the extent and deficiencies of policy and market studies of NTFPs and noted that there has been ambivalence at the policy level because the NTFPs markets are highly diverse and difficult to characterize, and because governments tend to view NTFP markets as a threat to the conservation and management of forests and woodlands. Systems for collection and dissemination of prices and other statistics on local and

internationally traded NTTPs are relatively undeveloped. The characteristics of NTTPs, lack of information as well as the limited attention of policy-makers make them susceptible to failures in markets, policies and institutions (Tomich et al. 1999). In recent years a number of initiatives include international treaties, conventions, protocols and recommendations such as RAMSAR Convention, World Heritage, CMS or Bonn Convention, CITES or Washington Convention, CBD, the World Conservation Strategy; Caring for the Earth; and the Global Biodiversity Strategy provide innovative frameworks for actions at global, regional, national and local levels for harvesting, usage and conservation of NTTPs, medicinal and aromatic plants have been launched to achieve a better framework for the sustainable use of biological diversity (UNEP 2001; CBD 2004).

3.2 Trends in Forest Policies in Ghana

The history of forest management in Ghana dates back to 1906 when legislations were enacted to control the felling of commercial tree species and the adoption of first Forest Policy in 1948. This wide range of forest policies have impacted on forest resources and have guided for the creation of permanent forest estates, protection of water supplies, maintenance of favourable conditions for agricultural crops, public education and research (MLF 1994). Since then, a consistent policy of selection, demarcation, reservation, protection of water catchment areas, maintenance of favourable conditions for cultivation of agricultural crops and the promotion of research and public education have been vigorously pursued. These policies and related laws were contained in various official documents and vested in specific ministries and state agencies for implementation. Table 1 illustrates various forest policies and legislations in Ghana and their major focus between 1948 and 2008.

3.2.1 Forest and Wildlife Policy of 1994

As indicated earlier, FWP-1994 is analysed because it is the overarching forestry policy document of the Government of Ghana. The policy has been implemented since 1995 and has led to the documentation of a plan of action

Table 1: Major forest policies and legislations with their major focus (1948-1994)

S. No.	Forest policies and legislation	Major objectives
1	1948 Forest Policy	• Creation of permanent forest estates • Protection of forests • Protection of water catchment areas • Environment protection for ecological balance
	Forests Ordinance, 1951	• Protection of forests • Protection of forest reserves
2	Forest Improvement Act of 1960	• Forest plantation development • Timber plantation establishment and management
3	Wild Animals Preservation Act, 1961 (Act 43)	• Conservation of wildlife
4	Wildlife Reserves and Conservation Policy of 1974	• Protection of wildlife resources • Species conservation • Wildlife conservation areas • Protected areas development • Defined forest offences
5	Forest Protection Decree, 1974	• Forest protection
6	Trees and Timber Decree 1974	• Logging guideline for timber industry • Sanctions for non-compliance with the guidelines • Promotion of export of processed timber
7	Forest Protection Decree, 1974	• Forest protection • Protection catchment areas
8	Trees and timber (chain saw operation) regulation of 1983	• Regulation of felling of trees • Forest plantations • Regulation of logging activities
9	Forest Protection (Amendment) Law, 1986	• Defines forest offenses and penalties • Forest Protection • Protection of water bodies • Species conservation
10	Forest Protection (Amendment) Act, 2002	• Forest protection • Reviewed forest offences and fines upwards
11	1994 Forest and Wildlife Policy	• Protection of forests • Species conservation • Regulation of timber harvesting • Development of cottage and agro-based industry • Community forestry and forest conservation • Deregulation and streaming of bureaucratic controls on wood export marketing • Involvement community in conservation of forest and wildlife resources • Rehabilitation and development of degraded forests
12	Timber Resource Management Act, 1997 - Act 547	• Timber utilization contract • Offences for illegal logging • Protection of logging on farms and plantations
13	The Forest Protection Amendment	• Community forestry and forest conservation

Table 1: Contd.

<i>S. No.</i>	<i>Forest policies and legislation</i>	<i>Major objectives</i>
	Act 2002	• Protect forest and wildlife • Reforestation and afforestation programmes • Forest offences penalties • Protection of water catchment areas
13	Timber Resources Management (Amendment) Act 2002	• Timber utilization contract • Offences for illegal logging • Protection of logging on farms and plantations • Community forestry and forest conservation • Protect land with farms from logging • Protection private forest plantation • Duration of timber concession rights

for guiding forest sector objectives and strategies to the year 2020 (MLF 1996). Since then three amendments has been made including the Forest Protection Amendment Act 2002, the Timber Resources Management Amendment Act 2002 and the Forest Plantations Development Amendment Act 2002. The ultimate aim of FWP-1994 is to ensure conservation and sustainable development of the country's forests and wildlife resources for the maintenance of environmental quality and perpetual flow of optimum benefits to all segments of society (MLF 1994). Specifically, the policy seeks to:

- Manage and enhance Ghana's permanent estate of forest and wildlife resource for preservation of vital soil and water resources, conservation of biological diversity and the environment and sustainable production of domestic and commercial produce;
- Promote the development of viable and efficient forest-based industries, particularly in secondary and tertiary processing, so as to fully utilize timber and other products from forests and wildlife resources and satisfy domestic and international demand for competitively-priced quality products;
- Promote public awareness and involvement of rural people in forestry and wildlife conservation so as to maintain life-sustaining systems, preserve scenic areas enhance the potential of recreation, tourism and income-generating opportunities;

- Promote research-based and technology-led forestry and wildlife management, utilization and development to ensure resource sustainability, socio-economic growth and environmental stability;
- Develop effective capability at national, regional and district levels for sustainable management of forest and wildlife resources.

3.2.2 Forest Protection Amendment Act 2002

The Forest Protection Amendment Act 2002 sought to amend the Forest Protection Decree 1774. The amendment defined higher penalties for offences and recognises the important role of community in forest and wildlife conservation and protection of water catchment areas. The Timber Resources Management Amendment Act 2002 and the Forest Plantations Development Amendment Act 2002 strengthen the ownership rights of farmers and provide incentives for re-afforestation and forest conservation. The amendment provided security for sustainable tree plantation investments by farmers.

4. MATERIALS AND METHODS

4.1 Study Area

This paper investigates forestry policies and strategies for promoting the development of NTFPs in Ghana with a special focus on the forest dependent communities in the Sefwi Wiawso District. As Figure 1 illustrates, the district is located in the moist semi-deciduous forest zone of the Western Region of Ghana with an estimated population of 178,000. The district has a total land area of 1,557 km² and an altitude ranging from 152–610 m above sea level. The area is characterised by a wet semi-equatorial climate with high annual rainfall ranging between 1,500–1,800 mm. The district falls within the tropical rainforest climatic zone, with warm temperatures throughout the year and moderate to heavy rainfall. The rainfall pattern is bimodal with maxima in May-June and September-October. Variation in monthly mean temperature is slight. The mean monthly maximum in the hottest month (February or March) is 31-33°C, and the monthly minimum in the coldest month August is 19-21°C.

The district undoubtedly has a rich floral and faunal diversity, but the high rate of growth of human population in the area exerts intense pressure on the fauna of the area. The district is important for future conservation efforts because it provides suitable habitats for several threatened species (diana monkey, black-and-white colobus, duikers, squirrels, etc.). The vegetation consists of dense undergrowth and forest tree species of the *Celtis-Triplochiton* Association, dominated by *Celtis mildbraedii*, *Triplochiton scleroxylon*, *Ceiba pentandra* (silk cotton), *Milicia excelsa* (odum), *Khaya ivoriensis* (African mahogany), *Terminalia ivoriensis* (emire), *Terminalia superba* (ofram) and *Bambusa* sp (bamboo). Most of the trees in the upper and middle layers of the forest shed their leaves usually in the dry season. A total of 271 plant species were inventoried in the seven habitat types in the Sefwi Wiawso District (Vordzogbe et al. 2005).

4.2 Methods

Comprehensive bibliographical investigation and collection of data through interviews conducted on policy-makers and managers, researchers, forestry experts, forest dependent communities and other relevant stakeholders on forest policies and management in Ghana provided the required information and data for the write-up of this paper. Sustainability analysis was used to critically evaluate the forest policies of Ghana and their goals between 1994 and 2008. The FWP-1994 of Ghana in particular was subjected to a rigorous SWOT analysis to determine its relevance and impact on ensuring the sustainability of forest resources and the promotion and development of NTFPs in Ghana. The FWP-1994 is analysed because it is the overarching forestry policy document of the Government of Ghana. The implementation of the policy, which began in 1995, targets conservation and sustainable development of the country's forest and wildlife resources, maintenance of environmental quality and a perpetual flow of optimum benefits to all segments of society (MLF 1994). To provide the paper a concrete character, the analysis of the policy and its impacts on the development and promotion of NTFPs is situated in the forest zones in the Sefwi Wiawso District in the Western Region of Ghana.

The literature review also generated essential information that informed the design of an appropriate conceptual framework and appropriate research instruments to guide the collection of primary data and information in the field between May 2009 and August 2009. Four participatory research methods were used in conducting the research in the field. Key informants interviews (Blay et al. 2007; Hay 2004), administration of questionnaires to farmers and stakeholders, participants' observations (Soto et al. 2001; Cook 1997) and consultations of experts were used to solicit communities' experiences on and knowledge of forest policy issues and NTFPs.

Primary data was collected through the completion of open and closed-ended questionnaires by forest professionals, local authorities, botanists, policy-makers, researchers and farmers. To examine the in-depth of knowledge of farmers on forest policies, open and closed-ended questionnaire were administered to 240 households randomly selected from 10 communities. Respondents were randomly selected to increase the probability of sampling both genders. The questionnaire also solicited information on the interviewees' family data, level of forest resource utilization and cultivation, knowledge of forest policies and their effectiveness, forest protection, conservation and management strategies, community rights to forest resources, NTFPs production, harvesting, utilization and strategies for their promotion, development and domestication process. The respondents were limited to adults between the ages 18 and 65 because they would most likely be the ones harvesting forest resources, and hence most affected by the forest policies. The communities include: *Abrabra*, *Sui*, *Sui Nkwanta*, *Kama*, *Nkonya*, *Ahenbenso*, *Apratu*, *Puakrom*, *Yawkrom*. These communities were chosen because they are both easily accessible and heavily depend on forest resources.

To generate additional information, open and closed-ended questionnaire were conducted on 20 key informants in the District who are knowledgeable in NTFPs (5 opinion leaders, 5 traditional leaders, 5 farmers and 5 religious leaders). To examine the impact of forest policies and the key challenges in mainstreaming NTFPs in their formulation, consultation and interview were conducted with the Forestry Commission of Ghana, Ministry of

Table 2: Social characteristics of respondents

<i>Age</i>	<i>%</i>	<i>Marital status</i>	<i>%</i>	<i>Family size</i>	<i>%</i>	<i>Education</i>	<i>%</i>
18-30 years	23.3	Married	78.2	Less than 5 people	39.1	No school	16.6
31-50 years	63.9	Single	12.8	5-7 people	40.6	Primary	57.9
51-65 years	11.3	Divorced	5.5	8-12 people	18.0	Senior sec. sch	18.8
> 65 years	1.5	Widowed	3.5	13-15 people	0.8	Tertiary	6.0
				>15 people	1.5	Postgraduate	0.7
Total	100.0	Total	100.0	Total	100.0	Total	100.0

Field Survey, 2009

Forest, Lands and Mines and the Ministry of Food and Agriculture as well the District Forest Services Division of Sefwi Wiawso. Additional focus group discussions were organized during a workshop in Sefwi Wiawso. Information solicited included the collection and cultivation of NTFPs in the district, forest conservation, and knowledge of forestry policies that guide the collection, conservation, development and management of forest resources.

4.3 Household Gender and Age Characteristics

A total of 240 respondents in the Sefwi Wiawso District participated in this survey, comprising of (66%) males and (34%) females. The age distribution of the respondents ranges between 18 and over 65 years. About 64% of the respondents were between the ages of (31-50) years and the economically active group was found within this age group. Ages 18-30 accounts for 23.3% of the respondents, 51-65 years formed 11.3% of the respondent whilst only 1.5% were aged above 65 years. Out of the 120 respondents, 78.2% were married, 12.8% were single, 5.5% were divorced and 3.5% widowed (Table 2).

5. RESULTS AND DISCUSSION

This section presents the results of the analysis of forest policies in Ghana and how they relate to the development and promotion of Timber and NTFPs in Ghana.

5.1 Forest Policy Coherence and Relevance

The results of the analysis have revealed that the dilemma of most of the forest resources management policies in Ghana is the lack of attention to human dimension aspects and

a focus on a pro-conservation and timber development approach even at the cost of local livelihoods. Forest policies have consistently been dictated by the economic priorities of the successive governments for exploitation of timber resources for revenue generation (Asante 2005; Ayine 2008). In the formulation of various forest policies since 1948, forests have always been perceived primarily in terms of their timber potential without considering the potential role of NTFPs in poverty reduction and livelihood improvement of forest dependent communities. NTFPs have not been adequately considered in forest management and planning process. As indicated in Table 3, the timber industry is a significant contributor to GDP and to the foreign exchange earnings of the country. Data from the Timber Industry Development Division (TIDD) of the Forestry Commission indicates that between 2002 and 2006, the country earned an average of •174 million from exports of wood products (Ayine 2008).

Table 3: Annual quantity and value of wood products exported – 2002-2006

<i>Year</i>	<i>Volume (M3)</i>	<i>Value (Euros)</i>
2002	472,427	183,365,836
2003	444,388	162,992,783
2004	455,180	170,487,364
2005	466,155	184,011,323
2006	451,608	170,097,902

Source: TIDD 2007; Ayine 2008

Ayine (2008) notes that the increased in global demand for Ghanaian log species coupled with enhanced utilisation of installed capacity of timber firms, have resulted in the increased of exports of logs from the country. During the first quarter of 2007 alone, the Forestry Commission approved and issued 2,061 export permits to cover shipments of various wood

products to foreign markets. This constituted a marginal increase of 3.52% over the number of export permits issued during the previous year (ITTO 2007). Most of the policies have therefore been systematically geared towards protection of forest to sustain timber for the wood industry and generation of foreign exchange. The policies have promoted over-exploitation and an eventual demise of unreserved forests. The poor state of the forest resources in Ghana is a clear indication that the existing policies and laws are inadequate and probably have no direct bearing on present-day realities or on the aspirations of the population. The over-emphasis on the on timber exploitation has undermined the livelihoods of not only the rural forest communities but also sustainable forest management strategies. NTFPs which are very crucial in poverty reduction and livelihood improvement were neglected.

5.1.1 Lack of Clarity and Direction in Forest Policy

The lack of clarity in forest policy governing the NTFPs and the weak of institutional framework and the inadequate support of the government has led to a low development of NTFPs in Ghana. This is also due to the inadequate realization of the ecological, economic and social values of NTFPs. NTFPs continue to be considered marginal products that have not received the desirable attention for management interventions, institutional and financial investments as given to more conventional agricultural products. However, some NGOs are currently promoting NTFPs farming as an alternative to harvesting from the forest. The Forestry Commission, for instance has four principal functions under its establishment including the regulation of the utilisation of forest and timber resources; the management of forest reserves and protected areas; the provision of assistance to the private sector; the development of forest plantations in order to ensure the restoration of degraded forests; and the expansion of national forest cover and increased production of industrial timber (Forestry Commission Act, Section 2) but there are no strategies to promote the development of NTFPs. The FWP-1994 contained declarations of the intent to maintain stakeholder's rights and promote forest re-

sources so as to establish a balance and forestall environmental extinction of the forests of Ghana. However, the policy has not been more responsive to livelihood improvement of forest communities. To acknowledge the explicit linkage between the economic welfare of the population and forests conservation requires that the forestry policy process be broader in its focus, giving greater consideration to the wide range of factors that impact on the rate of forest resources extraction and promote domestication. Baffoe (2007) notes that a major concern to conservation of forest resources is the gap between intentions of national policies and the realities on the ground as well as the highly skewed power structure in favour of governments and the industry on one hand and the marginalized local communities on the other.

5.1.2 Public Participation in Forest Policy-Making and Management

Although, the FWP-1994 stresses on the need for public participation in district forest management and protection through investments in tree planting and wood production, conservation and propagation of wildlife, value-added processing and marketing of finished products, investment in wood industry modernization and support for awareness and training, it failed to acknowledge the importance of NTFPs and provide the enabling environment to promote their development, domestication and management for effective poverty reduction and human development. There was limited involvement of local communities, particularly the forest dependent communities who depend heavily on forest resources. Local communities were not adequately consulted, or informed about government policies and legislation regarding community participation in forest and wildlife management, and how they could financially benefit from such ventures. Soto et al. (2001) notes that for local communities to meaningfully participate and benefit from the forest resources management, they must fully understand their legal rights for doing so, and must also demonstrate commitment and accountability. Also, there was no strategy to enhance their access, mode of harvest, and utilization. This has often resulted in a constant conflict between forest communities and forest officers over their collection from the forest. To

encourage local people to care about the forest and trees, it is important that they take part in decision-making on the management of the forest; they must benefit from the NTFPs (FD/FIMP 1995; Donkor et al. 2003). Through their increased awareness, rural residents could be involved in the protection, domestication, care and management of forests in their neighborhood.

5.1.2.1 Communities' Unawareness of the Forest and Wildlife Policy

The majority of the community members surveyed are not aware of the government policies and legislations protecting the exploitation of forest resources. 83% had not even heard about the 1994 Forest and Wildlife Policy and other amendments. Only 17% are aware of the policy but felt that it was only good in principle, but doubted the government's commitment in ensuring that it really works for the benefit of local communities. It was clear that government policy on forest resources is not effective in ensuring sustainable management of forest resources. Although, the findings suggest that, almost all the key informants and the local administrators interviewed were aware of the FWP-1994 and other policy amendments in 2002, 74% of them did not know the policy intents. Lack of clarity of the policy intents often lead to poor outcomes for sustainable forest management and local livelihoods. To them this policy puts more emphasis on forest conservation. Rights and obligations of local communities were not elaborated clearly in the policy. They believed that the policy does not adequately confer resource user rights to the communities. Most of the community members were not aware of the government's effort to enhance their rights to forest products and management of natural resources as stipulated in the FWP-1994. 55% were even doubtful as to whether the Government was really serious in what it was promoting, with respect to community participation in forest resource management. Opinions about what should be the most important goals of forest policy, 67% of respondents stated that the most important goal of the forest policy should motivate farmers and community members for tree transplanting, promote NTFPs farming and regulation of timber exploitation.

5.1.3 Lack of Institutional Framework and Focus

The inadequate attention on the development of NTFPs in Ghana is the results of lack of institutional framework and focus. Although some of the forestry institutions seem to be promoting NTFPs in one way or the other, there is no comprehensive policy on NTFPs from which these institutions derive their programmes and strategies. Forestry institutions and management are not challenged to improve rural livelihoods by taking appropriate measures to promote NTFPs farming as an alternative the devastating slash and burn method of farming. The policy is theoretical whereas, practically the attitude of forest officers has remained the same as the implementation of previous policies. Most of the officers of the district forestry services display more of authoritarian and possessive behaviour. Box 1 indicates the various forest and wildlife institutions and their area of focus.

Box 1: Forest and Wildlife Institutions and their areas of focus

- *Forestry Department* - responsible for protection and management of the forest estate.
- *Wildlife Department* - responsible for protection and management of wildlife and protected areas.
- *Forest Products Inspection Bureau* - responsible for certification of product standards in the timber industry.
- *Timber Export Development Board* - responsible for marketing intelligence on forest products and promotion of improved industrial processing.
- *Forestry Commission* - responsible for advising the Minister on forest and wildlife policies.
- *Forestry Research Institute of Ghana* - responsible for undertaking research to solve forestry and forest industry problems.

Source: Donkor et al. 2003; MLF 1996

5.1.4 Sustainable Forest Management

The promulgation of the FWP-1994 of Ghana was welcomed by forestry stakeholders as it represents an important milestone in the government's recent efforts to strengthen the basis for sustainable forest management. It was the first policy which recognised the people living in and around forest areas as stakeholders. The policy recognises the role of forests and wildlife in poverty alleviation in rural areas. It also encourages active participation of communities in the management of forest and wildlife.

The Timber Resources Management Amendment Act 2002, and the Forest Plantations Development Fund Amendment Act 2002, also strengthen the ownership rights of farmers and would provide for incentives for sustainable forest management. This approach to forest management has provided sufficient security for sustainable tree plantation investments by farmers. Agyeman et al. (2003) however, noted that despite the intent of the strategy, there is the need for a legislation to ensure these rights or to ensure an equitable flow of benefits to landowners and local communities or their consultation on decisions influencing resource utilization and management. The amendment permit farmers to farm parcels of degraded forest reserves to produce food crops and to help establish and maintain timber trees through the “*Improved Tungya System*”. The intention is to produce a mature crop of commercial timber in a relatively short time, while also addressing the shortage of farmland in communities bordering forest reserves so as to mitigate and the reduce the impacts of climate change on the communities. Unfortunately, the survey has revealed that the concept has not been effectively implemented in the study area. Communities often lack incentives to participate in forest management due to lack of transparency, unclear roles and responsibilities of parties of involved and unfair benefit sharing. Baffoe (2007) notes that even under collaborative and participatory management concept, forest are being managed mainly to benefit national governments, the multi-national corporations or both with virtually no benefit to local communities.

5.2 Impact of Policy on NTFPs Development and Promotion

Although, the FWP-1994 and the subsequent forest policy amendments in 2002 recognize the important of forest resources to poverty reduction, like the previous forest policies it placed more emphasis on conservation without any concrete emphasis on the development of NTFPs for rural livelihoods. Most of the policy initiatives were aimed at forest conservation and ignored the livelihood provisions for local communities. However, even the conservation aspect of those policies was never implemented effectively. People’s participation in plantation and management of forests was not given

sufficient attention and social and cultural aspects of forest management were ignored. Several issues that are crucial for a sustainable management of forest resources have not received adequate attention in the policy; the pivotal role of NTFPs in poverty alleviation and human development were overlooked. The principal challenges bedeviling forest resources management in Ghana such as the very complex land tenure system, the conversion of forests to farmlands, dependent of NTFPs by forest dependent communities, a skewed benefit-sharing mechanism, and ineffective involvement of relevant stakeholders were not properly addressed in the new forest and wildlife policy.

5.2.1 Limited Access by Forest Dependent Communities to Forest Resources

The livelihoods of the population in the study area are inextricably linked to forest resources. Though, the FWP-1994 recognizes the “*rights of people to have access to natural resources for maintaining a basic standard of living and their concomitant responsibility to ensure the sustainable uses of such resources*”, unfortunately; the rural population’s access to forest resources is highly limited with even stricter restrictions for commercial purposes. Over the years, the forest policies were designed to be more restrictive, depended on effective enforcement measure and deprive the forest dependent communities of their livelihoods and perceived traditional rights to land and forest resources. These restrictions have been put in place under the flag of sustainable resource use (Boateng 1994; Agea et al. 2001; Baffoe 2007). However, whilst communities’ access is highly restricted, the same cannot be said of the logging companies. Within the boundaries of forest reserves, the collection of forest products like chewing sticks, poles, cane, pestles, bush-meat, snails from the forest for use is a source of regular conflict between local people and wildlife and forestry officers. This has often resulted into conflicts between local communities and forestry officers because the communities believed their traditional rights to forest products are denied.

Though the forest resources need protection from the destructive human activities, the challenge is that as much 32% of the household

income of farmers in the study area comes the wild harvesting and domestication of NTFPs. Considering these livelihood sources for the large numbers of the people in the communities, any efforts to restrict extraction of forest products from the forests without sustainable measures to promote domestication will negatively affect the basis of rural subsistence as well as further limit employment opportunities and participation in sustainable forest management (Blay et al. 2007; Ahenkan and Boon 2008). These products provide valuable sources of income, food, nutrition, building materials, and many household tools (Falconer 1994; Ntiemoa-Baidu 1998; Ahenkan and Boon 2008). The Ghana Timber Resource Management Amendment Act 617 of 2002 also does not allow farmers to harvest timber even from their farmlands. When this timber is harvested by timber companies who have timber exploitation permits, farmers are not adequately compensated for the damages caused to their crops (Nketiah et al. 2005). This has demotivated farmers to the extent of destroying young naturally regenerated trees on their farmlands and staying away from planting trees.

5.2.2 .Overharvesting Vs Domestication of NTFPs

The study also reveals that the overharvesting of NTFPs and depletion of forest resources was due to the failure of the various forest policies to effectively pay greater attention to NTFPs collection and their domestication. It was certain that the communities are aware of their own contribution to resource decline; respondents acknowledged that over-harvesting has exceeded the replacement capacity of key the NTFPs and other species. 75% agree that the current practices encourage indiscriminate collection of NTFPs from the forest and hence their depletion. There is also concern about destructive methods and high harvesting levels of NTFPs especially hunting and illegal logging. However, 25% believe the wild harvesting is not destructive and not a contributory factor. NTFPs are considered free commodity and hence the community member defy forestry officers to harvest the products from the forest under no systematic management regimens.

The current practice of harvesting NTFPs such as pestles, chew sticks, rattans, climbers,

honey, bushmeat, snails among others is obviously unsustainable. It has put a lot of pressure on the forest resources and has limited potential for improving household incomes because the products are depleted from the forests. The exploitation has resulted in serious deforestation and the depletion of biodiversity in the forest zone, especially in the Sefwi Wiawso District and has already caused extinction of many species, and large numbers of many other species are currently endangered and may soon become extinct (Vordzogbe et al. 2005). Indeed, one of the biggest environmental challenges facing Ghana today is the need to reconcile conflicting demands of different stakeholders for the goods and services provided by forests. The continuous depletion of these forest resources point to their eminent loss in the long-term and which will have enormous consequences on the forest and the livelihood of the population.

5.2.2.1 Domestication and Promotion of NTFPs

The results of a field survey conducted in the Sefwi Wiawso District show that the communities recognize the important role of NTFPs in the income generation, shelter, health and food security. While cocoa and other farming activities are important in the study area, farmers have a great variety of occupations and income-earning strategies to supplement their incomes from traditional farming activities. Farmers engage in the domestication of NTFPs such as beekeeping, grass-cutter rearing, mushroom cultivation, snail rearing and cultivation of medicinal plants to supplement their incomes under the guidance of some development non-organisations and forestry stakeholders. Most of the respondents were active in beekeeping (44.4%), followed by grass-cutter (39.8%), snail rearing 29.3% whilst 28.6% and 2.3% are engaged in the production of mushrooms and medicinal plants respectively to supplement their incomes. Figure 2 shows the distribution of NTFPs domestication activities among respondents. Farming of these products constitute an essential development alternative to the prevalent over-exploitation of forest resources, the devastating slash and burn method of agriculture and the indiscriminate and illegal logging of forests.

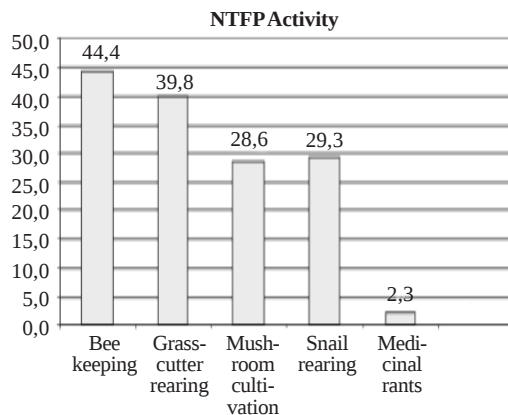


Fig. 2. Distribution of NTFPs activities (percent)

With regard to why they engage in NTFPs farming, about 65.2% cited supplementing their income as the reason; 11.5% farm these products due to poor cocoa harvests, 9.7% do so due to lack of alternative economic activities; whilst 6.2% specified conservation of forest as the motivation for producing NTFPs. Furthermore, 7.0% and 3.2% indicated that they respectively engage in the production of these products to improve the food security of their families and for conservation purposes. Finally, 1.4% also farm the NTFPs due to the non-availability or small size of farmlands.

Despite the important role of the NTFPs farming in reducing pressure on the forest resources and livelihood improvement, in the formulation of the FWP-1994 and the subsequent amendments in 2002, no attempts were made to promote their domestication as a measure to reduce the pressure on the forest resources. Without effective mechanisms to reduce pressure on hunting and harvesting of NTFPs, wildlife and plant populations will continue to decline resulting in species and biodiversity loss, diminished ecosystem health, and loss of a valuable, renewable resource that provides food and money to rural households. Forestry policies need to encourage and promote the farming of NTFPs to reduce pressure on the forest resources (Ahenkan and Boon 2008). Their sustainable development and promotion will engender increased awareness on the application of poverty reduction, improvement of livelihoods and sustainable approaches to natural resources and forest management. Forest-based livelihoods could better enhanced

by optimising NTFP production through domestication (Arnold and Ruiz Pérez 2001; Boon and Ahenkan 2008).

5.2.3 Causes of Depletion Forest Resources

The continuous depletion of forest resources in the communities was ascribed by 75% of the respondents to logging and harvesting of NTFPs. Encroachment on the reserved by farmers was cited by 20% of the farmers. Other causes are bushfires (3%) and slash and burn farming method of farming (2%). Respondents mentioned other factors ranging from less priority being given to environmental issues, inadequate knowledge of sustainable farming practices, to conflicting government policies. Some of the community members felt that forest fringe communities are excluded from forest resources utilization and management policies. The community members continue to destroy the forests and also connive with other people to overexploit forest resources that are so vital to their own survival. The main factors militating against forest resources conservation and management and which underline the continued pressure on forest resources, the antagonism and conflicts between local people and conservation authorities include poverty, alienation of local communities in their management, lack of public awareness of general conservation issues and regulations. Respondents cited factors including unfair benefit sharing (35.8%), unfair treatment by the timber companies (29.2%), lack of access for wood for community development projects (20.8%), and lack of accountability of royalties to stool lands by their traditional rulers (14.2%). Also mentioned include corruption and poor monitoring system on the part of forest officers have promoted illegal logging and other activities that are detrimental to the forests. Unfortunately these concerns were not address in the policy. Table 4 indicates reasons why community members connive with illegal loggers.

The externally enforced alienation of local communities from forest resource management does not promote healthy relations and conservation of forest resources. Although, the 1994 policy and its subsequent amendment in 2002 seek to encourage the participation of local communities, the mechanisms for the participation are not spelt out in the policy.

Table 4. Reasons why community members connive with illegal loggers

<i>Reason</i>	<i>Freq</i>	<i>%</i>
Unfair benefit share	86	35.8
Unfair treatment by the timber companies	70	29.2
Lack of wood for community development projects	50	20.8
Lack of accountability of royalties to stool lands	34	14.2
Total	240	100.0

Source: Field Survey 2009

5.3 SWOT Analysis of FWP-1994

The assessment of the efficacy of forest policies on NTFPs development provides important insights into the strengths and weakness of the forest policies in Ghana. Table 5 identifies and analyses the strengths, weaknesses, opportunities and threats of the 1994 Forest and Wildlife Policy of Ghana.

Table 5: WOT analysis of 1994 forest and wildlife policy

<i>Strengths</i>	<i>Opportunities</i>
• Legal backing • Protection of forest resources • Species conservation • Regulation of timber	• Community willingness to participate • Stakeholder participation • Multi-stakeholder consultation processes • Domestication of NTFPs harvesting • Forest certification • Forestry sector development master plan
<i>Weaknesses</i>	<i>Threats</i>
• Inadequate community involvement • Lack of recognition of NTFPs in livelihood improvement in the policy • Weak institutional framework • Weak human resources • Structural imbalances that favour the industry	• Deforestation • Poverty of forest depending communities • Overharvesting of NTFPs • Depletion of forest resources • Pressure on forest resources • Illegal timber concessions • Deforestation and climate change • Illegal logging • Bushfires • Poor public sector management of forests

6. CHALLENGES HINDERING MAINSTREAMING OF NTFPS IN FOREST POLICIES IN GHANA

The present forest policies in Ghana lack clear objective on the development and promotion of NTFPs. The various challenges hindering the

mainstreaming of NTFPs in forest policy include the economic priorities of the forest policies, lack of information on the potential role of NTFPs, the undeveloped nature NTFPs trade in Ghana, lack of statistical information on NTFPs, limited attention of policy-makers, forest of institutional focus and priority.

6.1 Economic Priorities of Forest Policies

As indicated earlier, forest policies have been dictated by the economic priorities of the government especially the focus on exploitation of timber resources and a neglect of the contribution of NTFPs in rural development and poverty reduction. The policy-makers and forestry stakeholders still categorize NTFPs as “minor” forest products. Most forestry programmes and projects therefore focus on large-scale projects with less attention paid to small-scale natural and artificial regeneration at household farm and community levels. This disparity between local importance of NTFPs and policy emphasis on timber production underscores contrasting valuation of NTFPs between policy makers and local people.

6.2 Lack of Information on the Potential role of NTFPs in Poverty Reduction

The lack of information on the importance of NTFPs in supporting rural livelihoods is a key challenge facing their mainstreaming of in policy-making. Consequently, their potential in poverty reduction and forest resources conservation has gone unnoticed by policy-makers. This is also due to the fact that there is lack of proper inventory on NTFPs. Although, the Forestry Commission and other forestry stakeholders have made some attempts to make inventory of NTFPs, they only focused on rattans, climbers and some minor tree species. The Ghana Poverty Reduction Strategy Paper (GPRSP) also failed to consider NTFPs and their nutritional and health linkages. However, some of the forest policies regarding NTFPs focus primarily on forest game and in some cases, wildlife management overlaps with the tourism sector.

6.3 Inadequate Statistical Information on NTFPs

The low representation of NTFPs in policy-making is also due to the inadequate statistical

information on NTFPs. There is a serious lack of basic statistical information on their volumes, trade, income and nutritional values. The information base of NTFPs in Ghana is still poor. Existing information sources are dispersed and no standardized system for compiling data on NTFPs is in place. The identification, evaluation and sustainable utilization of NTFPs requires having detailed information on the natural resource system where they originate; biological and chemical properties; geographical distribution; potential uses and values; harvesting and processing methods; the market situation. This is also due to the fact that the NTFPs trade in Ghana is undeveloped. Marketing is basically done individually; it is unorganized, dispersed and farmers lack the necessary marketing skills and information required for optimal performance (Ahenkan and Boon 2008).

6.4 Research Focus

The non- recognition of NTFPs in Ghana in the forest policy is also due to the fact that there has not been adequate research on the effects of forest policies on the development and promotion of NTFPs in the country over the years. Much attention in forest and development research centred on the commercial productivity of timber and its contribution to the economy and less on the actual and potential role of the multiple products and environmental services offered by forests.

7. RECOMMENDATIONS FOR MAINSTREAMING NTFPS IN FOREST POLICIES IN GHANA

7.1 Clear Policy on NTFPs

Forest policies in Ghana have not adequately addressed issues of NTFPs in poverty and forest conservation. The recognition of the importance of NTFPs for rural development and the consequent need for policies to guide their use, management and development has long been ignored by policy-makers. An appropriate policy framework for a sustainable promotion of NTFPs is necessary to ensure their effective development and promotion in Ghana. Such a policy will encourage farmers to domesticate these products on sustainable basis and also strengthen agricultural research institutes and

offer them the opportunities to develop and supply breeding seeds and stock to NTFPs to farmers. Clear and visible NTFPs policy and management mechanisms are therefore required to catalyze the development and promotion of NTFPs in Ghana. The forest policy should have foundation of carefully organized research studies on forest products. These studies will ensure the involvement of grass root level people and civil society organizations.

7.2 Domestication of NTFPs

A clear policy on the development and domestication of NTFPs will help to ensure a sustainable harvesting of the products, reduce pressure on forest resources and enhance the livelihoods of forest communities. The forest policies and strategies should be backed by proper management practices. The domestication of NTFPs such as grass-cutters, honey, mushrooms, snails and medicinal plants will significantly help to conserve plant and animal species and enhance livelihoods of forest dependent communities. There is also the need to motivate forest fringe communities through innovative incentives such as facilitation of access to training and finance to engage in NTFPs farming.

7.3 Promotion of NTFPs

A vigorous promotion of NTFPs farming constitutes a very effective mechanism for popularizing the farming of NTFPs as an instrument for poverty reduction and ensuring sustainable management of natural resources in Ghana. Awareness creation on the nutritional, medicinal, and environmental benefits of NTFPs by the Ministries of Agriculture, Health and Environment will significantly help to promote the farming of NTFPs in Ghana. Increasing access to market information to NTFPs sellers can be achieved through information dissemination, empowerment of collectors and establishment of linkages between collectors and traders.

8. CONCLUSION

Ghana has come a long way in pursuing sustainable management of her forest resources through the implementation of various forest

policies. However, the dilemma with most of the forest resources policies in the country is the lack of attention accorded the human dimension; the focus is on sustainable timber exploitation even if it is detrimental to the livelihoods of forest dependent communities. Forest policies have consistently been dictated by the economic priorities of the successive governments which basically hinged on the exploitation of timber resources for revenue generation. This has remained a major hurdle to the growth and development of NTFPs in Ghana. NTFPs have not been adequately considered in forest management and planning process and are exposed to various challenges including the economic priorities, political will, inadequate of information on the potential role of NTFPs, the undeveloped nature NTFPs trade in Ghana, inadequate statistical information on NTFPs, forest of institutional focus. This has impacted negatively on the promotion and development of NTFPs in the country. An appropriate policy framework for the sustainable promotion of NTFPs is necessary to help to ensure an effective development, promotion and sustainable harvesting of NTFPs in the country. Such a policy will also encourage farmers to domesticate these products on sustainable basis and thus reduce pressure on the forest resources.

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