Food and Agriculture Organization of the United Nations

FORESTRY CONTRIBUTION TO NATIONAL ECONOMY AND TRADE IN

Ethiopia, Kenya and Uganda

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FORESTRY CONTRIBUTION TO NATIONAL ECONOMY AND TRADE IN

ETHIOPIA, KENYA AND UGANDA

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PREFACE

Despite the fact that forests and trees continue to play a crucial role in improving and maintaining biodiversity and soil fertility, and ensuring sustainability for smallholder farmers, there is a common pattern of deforestation in African countries. This is caused by expansion of agricultural land into forested areas as escalating population growth intensifies demand for arable land and forest and non-forest products.

From an economic point of view, it is equally important to understand the contributions of forests to national economies, household incomes and trade. However, there is a common trend in African countries whereby the economic contributions of forests have not received the desired attention from policy-makers to ensure budgetary allocations for sustained growth in the forest sector of these countries. This has led to uncontrolled reduction of forest cover and increased imports of forest-related products, resulting in diminishing foreign currency reserves.

It was for this reason that FAO commissioned the Ethiopian Forestry Society (EFS), the Forestry Society of Kenya (FSK) and the Ugandan Forestry Association (UFA) to prepare a brief study report to assess the economic significance of forestry in their countries, highlighting the profile of forestry; the economic benefits such as the synopsis of export and import values of forestry products and its contribution to the national economy; the economic costs of forestry; as well as a legal and policy analysis of strengths and weaknesses in the sector.

The development of this study was a highly collaborative effort between the FAO Sub-regional Office for Eastern Africa and the three institutions, with the aim of raising awareness of the need to increase the valuation and use of forest resources and ecosystem services as a means to increase benefits from trees, forests and forestry for the promotion of social and economic development.

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ABBREVIATIONS/ACRONYMS

EFS	Ethiopian Forestry Society
FAO	Food and Agriculture Organization of the United Nations
FRA	Forest Resources Assessment
FSK	Forestry Society of Kenya
GDP	gross domestic product
IUCN	International Union for Conservation of Nature
KNBS	Kenya National Bureau of Statistics
Ksh	Kenyan Shilling
NTFPs	non-timber forest products
PES	payment for ecosystem services
UFA	Ugandan Forestry Association
UN	United Nations
UN DESA	United Nations Department of Economic and Social Affairs
UNFF	United Nations Forum on Forests

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EXECUTIVE SUMMARY

The economic contributions of forests in Eastern African countries have not received the desired attention in terms of policy and budgetary allocation needed for sustained growth of these forests. This, among other reasons, has led to the reduction of forest zones and an increase in the import of forest-related products, resulting in dwindling foreign currency reserves.

Although public awareness and positive public outcry have increased over the years, there is a growing tendency to utilize the environmental services of forests with little concern over their economic significance. In order to gain a better understanding of forestry's contribution to national gross domestic product (GDP) in the East African Sub-region, the FAO Sub-regional Office for Eastern Africa commissioned the Ethiopian Forestry Society, the Forestry Society of Kenya and the Uganda Forestry Association to undertake economic studies of existing forested areas in their respective countries.

The commissioned institutions carried out a study on their country's forestry sector and its economic and trade benefits, the status of the legal and institutional framework governing the utilization of forest and non-forest products, the import and export of forest-related products, as well as the national economic costs of forests. These institutions also conducted national workshops in order to have their study findings discussed and validated by national stakeholders, which served to augment their reports with policy recommendations on how to improve the valuation of forests in the national economy and on the trade balance.

This paper attempts to showcase the economic contributions of forests in Ethiopia, Kenya and Uganda in order to illustrate the multiple benefits derived from forests and the potential contribution of forests to national economies and GDP.

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INTRODUCTION 1

Despite the fact that forests and trees continue to play a crucial role in improving and maintaining biodiversity and soil fertility, and ensuring sustainability for smallholder farmers (UNFF, 2013), there is a common pattern of deforestation in African countries. This is caused by expansion of agricultural land into forested areas as escalating population growth intensifies demand for arable land and forest and non-forest products (UN DESA, 2012).

From an economic point of view, it is equally important to understand the contributions of forests to national economies, household incomes and trade. However, there is a common trend in African countries whereby the economic contributions of forests have not received the desired attention from policy-makers to ensure budgetary allocations for sustained growth in the forest sector of these countries (IUCN, 2001). This has led to uncontrolled reduction of forest cover and increased imports of forest-related products, resulting in diminishing foreign currency reserves.

It was for this reason that FAO commissioned the Ethiopian Forestry Society (EFS), the Forestry Society of Kenya (FSK) and the Ugandan Forestry Association (UFA) to prepare a brief study report to assess the economic significance of forestry in their countries, highlighting the profile of forestry; the economic benefits such as the synopsis of export and import values of forestry products and its contribution to the national economy; the economic costs of forestry; as well as a legal and policy analysis of strengths and weaknesses in the sector.

"From an economic point of view, it is important to understand the contributions of forests to national economies, household incomes and trade."

In Ethiopia, forest and woody vegetation resources comprise natural high forests characterized by woodlands, bush lands, plantations and on-farm trees. The forestry sector plays several important economic roles – by earning foreign currency mainly from export of non-wood forest products, by providing energy and wood products, by

generating formal and informal employment and by providing environmental services that support the sustainable operation of other sectors. Forestry products in the country are categorized into different subsectors, each contributing to the national GDP. The timber production subsector represents the main source of raw material that constitutes most of the total national wood production.

In Kenya, forests are broadly classified into natural forests, plantations and trees on farms. The main products extracted from forests, which are used in industries or at household level, are roundwood, fuelwood, poles and non-timber forest products. Nationally, forests are an important resource which contributes significantly to the livelihoods of many people through the provision of ecosystem services as well as social and economic benefits. Given the importance of forests in the country, there is a shortage of high-quality tropical hardwood, which is attributed to a ban that was placed on the exploitation of natural forests dating from 1985. In order to ensure the sustainable management of forests in Kenya, various policies and legislations have been put in place.

In Uganda, forested areas are classified into six categories, namely broad-leaved plantations, conifer plantations, well-stocked tropical high forest, low-stocked tropical high forest, woodlands and bush. Among the products contributing to the Ugandan forestry subsector's growth are fuelwood, timber, poles and other derivatives from trees. These products have been important in supplying the energy needs, domestic comfort, health, security and development of the people of Uganda. The country's forest resources moreover have great potential for increasing exports and generating products such as paper, plywood and parquets. This is in line with the Government of Uganda's objectives of increasing exports from non-traditional sources and diversifying production.

Understanding and emphasizing the forestry sector's potential to make a positive contribution to national economies would help gain the attention of national policy-makers in order to promote sustainable forest management with significant support provided to the sector (FAO, 2008). This could assist in alleviating poverty by creating employment and secure livelihoods for communities, thereby ensuring sustainable use of forests for national development.


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METHODOLOGY 2

The Ethiopian Forestry Society, the Forestry Society of Kenya and the Uganda Forestry Association were commissioned by FAO to carry out a study limited to the forestry sector's commercial and non-commercial utilization, marketed output, and forest and non-forest products in Ethiopia, Kenya and Uganda respectively.

The methodology employed by the three institutions was to prepare and design a questionnaire for collection and analysis of forestry baseline data, followed by preparation of a first study report. After conducting a peer review of their first study report drafts, the three institutions were able to finalize their country study reports and prepare a manuscript document consisting of the study's main findings and recommendations.

The studies were based on the following direct values:

- Profile of forestry and forest ecosystems;
- Economic benefits of forests;
- Country import and export of forest-related products;
- Economic costs of forests;
- Legal, policy and institutional framework issues regarding the utilization of forest and non-forest products;
- Some major players and experiences in the forestry sector; and
- Forestry training and research.

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COUNTRY FORESTRY PROFILE 3

3.1 Status of Ethiopia's forests

Recent data on the forest resources of Ethiopia, documented in FAO's Forest Resources Assessment (FRA), puts Ethiopia among countries that have forest cover ranging between 10 to 30 percent of their total land area. According to FRA (FAO, 2015), Ethiopia's forest cover is 12.4 million hectares (11.5 percent). Factors that contributed to accelerating the decline of vegetation cover in the country between 1990 and 2010 include the high level of poverty, coupled with the increase in human population, the consequent demand for forest products such as firewood and the subsequent conversion of forests and woodlands into farmlands and settlements.

Between 1990 and 2000, the extent of Ethiopia's forests (including both forests and woodland) decreased by 1.4 million hectares. By 2005, the forest cover had further declined and was estimated to cover 13.0 million hectares. In other words, Ethiopia lost over two million hectares of forest, with an annual average loss of 140 000 hectares (FAO, 2015), between 1990 and 2005. Currently, the forested area is estimated to be 12.4 million hectares, which represents 11.4 percent of the total land area.

The main reasons for deforestation are clearing of forests and woodlands for agricultural purposes, fuelwood, charcoal production and construction materials. The fact that plantation forestry has been very far from meeting the country's demand for wood indicates the inevitability of deforestation. The underlying causes of deforestation are closely linked with the vicious cycle of mutually reinforcing factors such as poverty, population growth, poor economic growth and the state of the environment.

Table 1: Forest area of Ethiopia (1990-2015)

Country	Land area (1 000 ha)	Forest Area (1 000 ha)				
		1990	2000	2005	2010	2015
Ethiopia	109 631	15 114	13 705	13 000	12 296	12 499

FRA 2015

The Government of Ethiopia has devised a strategy to reverse the situation by means of tree-planting activities. The tree-planting campaign has been conducted throughout the country on an annual basis since 2008 and according to government information, forest cover is increasing. Between 2010 and 2015 an increase in forested area has been recorded, with an estimated gain of 40 000 hectares a year (FAO, 2015). In order to conserve and protect the forest resources of the country, Ethiopia has established protected forest areas, which are about 80 in number and represent a total area of 26 879.15 km^2.

3.2 Status of Kenya's forests

Recent data on the forest resources of Kenya, documented by FAO's Forest Resource Assessment (FAO, 2015), indicate that Kenya's forest cover is 4.4 million hectares (7.7 percent of the total land area). Results from Land Use, Land Use Change and Forestry mapping (FSK, 2015) revealed that over the last 20 years the ratio of forest cover to total land area of Kenya had been changing. These figures have been reflected by FRA as seen in the table below. In 1990 the total forest cover was 8.3 percent, which declined to 6.2 percent in 2000, but by 2005 a positive trend revealed an increase to 7.1 percent.

The decline in forest cover between 1990 and 2000 is attributed to official and unofficial excision of state forests, forest conversion to farmland and depletion through illegal logging. The main drivers of change in forest cover are similar to those in Ethiopia, namely population growth; a weak governance and legal framework; insecure land tenure; forest fires; expansion of agricultural land; market failure; and social traps. But the most common of all is the unsustainable exploitation of forest resources. For a long time, forests were treated as a non-renewable resource and trees were harvested beyond their capacity to regenerate. This unsustainable exploitation is still common in woodland and dryland forest areas where many of the trees are cut indiscriminately, mainly for

Table 2: Forest area of Kenya (1990-2015)

Country	Land area (1 000 ha)	Forest Area (1 000 ha)				
		1990	2000	2005	2010	2015
Kenya	56 914	4 724	3 557	4 047	4 230	4 413

FRA 2015

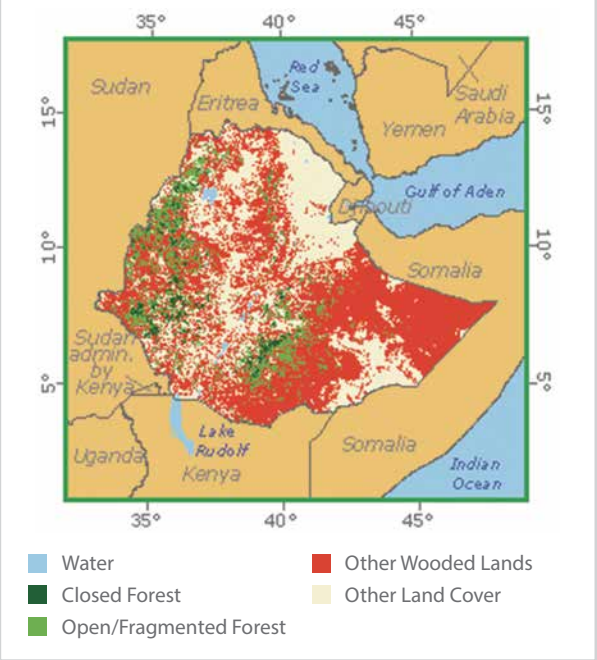

Figure 1: Forest coverage in Ethiopia

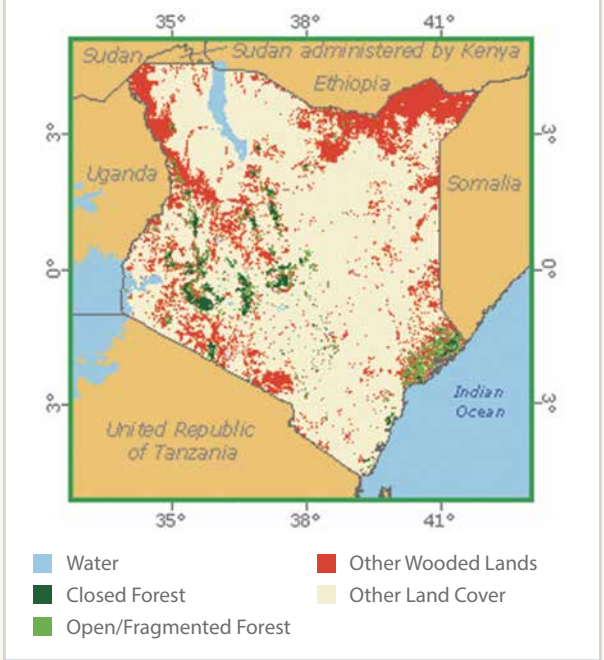

Figure 2: Forest coverage in Kenya

charcoal production, without corresponding tree planting or natural regeneration.

Deforestation and forest degradation have resulted in secondary forests. These secondary forests are regenerating largely through natural processes after significant removal or disturbance of the original forest vegetation state, by human or natural causes, at a single point in time or over an extended period. These secondary forests show a marked difference in forest structure and/or canopy species composition compared with untouched primary forests. In secondary forests, the rate of natural regeneration is slow owing to depletion of seed stocks and encroachment by perennial grasses.

Since 2000, forest cover has been steadily increasing from 3 557 million hectares to the current 4 413 million hectares. In the course of the last five years, there has been a yearly increase of 36 600 hectares in forest cover (FAO, 2015).

3.3 Status of Uganda's forests

Drastic changes in forest cover have taken place in Uganda during the past century. According to FRA (FAO, 2015), as much as 2.6 million hectares of forest cover have been lost in a period of just 25 years, which is approximatively 13 percent of the total land area.

Unlike Ethiopia and Kenya, where progress has been made in increasing forest cover, Uganda has progressively been experiencing negative rates of change. It is recorded that in a period of 10 years from 1990 to 2000, the average yearly loss of forest cover amounted to 88 000 hectares. This annual loss amassed to 111 000 hectares per year between 2000 and 2010, and just in the last five years this figure grew to a loss of forest cover amounting to 185 000 hectares (FAO, 2015).

A study conducted under the auspices of the REDD+ process for Uganda into the underlying causes of deforestation and forest degradation, revealed that the demand for a variety of forestry resources, with limited options for alternatives or substitutes, is on the increase. Human capacity to manage both protected and non-protected areas properly to ensure sustainable forest management is lacking.

As in both Ethiopia and Kenya, the main drivers of deforestation and forest degradation in Uganda consist of agricultural expansion in forested lands, charcoal production, uncontrolled firewood harvesting, livestock grazing, pit sawing and timber production, human settlement and urbanization (UFA, 2014).

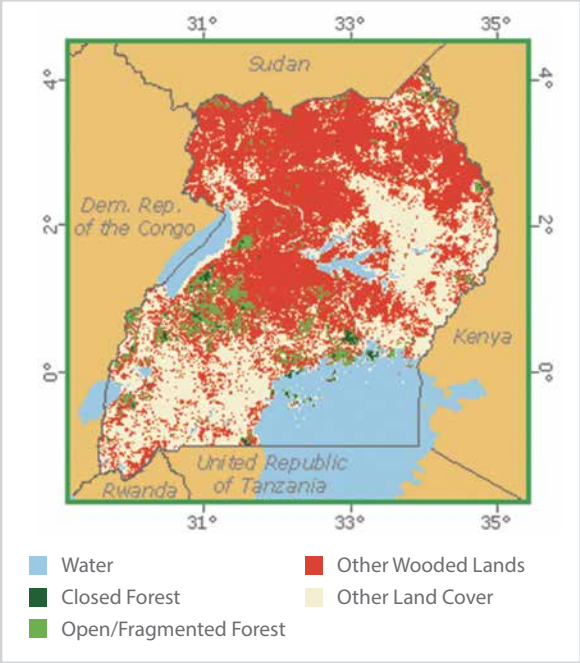

Figure 3: Forest coverage in Uganda

Table 3: Forest area of Uganda (1990-2015)

Country	Land area (1 000 ha)	Forest Area (1 000 ha)				
		1990	2000	2005	2010	2015
Uganda	19 710	4 751	3 869	3 429	2 753	2 077

FRA 2015


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BENEFITS AND SIGNIFICANCE OF FORESTS 4

4.1 Ethiopia

In Ethiopia the contribution of forests to local livelihoods and the national economy as a whole is significant, but is largely unrecorded and hence unrecognized. Forest resources are among several natural resources that have substantial socioeconomic, cultural and ecological importance in Ethiopia.

There is a growing awareness of the significance of forest resources and the link between biodiversity, ecosystem services and human well-being (EFS, 2014). Forests are also the source of timber and non-timber forest products (NTFPs). The economic value of Ethiopian forests is not given the proper attention, even if they are sources of ecosystem services, including NTFPs that sustain rural livelihoods.

The most important NTFPs that generate substantial income for rural households and foreign currency earnings in Ethiopia are coffee, honey and natural gums and resins. A study conducted on a participatory forest management concession in a southeastern city called Dodola, indicates that forest products are the most important sources of income, contributing to 34 percent and 53 percent of household per capita income and per capita cash income respectively (EFS, 2014).

The forestry sector plays six key economic roles in Ethiopia:

- It provides foreign currency earnings, mainly through export of non-wood forest products;
- it offers import substitution, mainly for energy and wood products;
- it contributes to the gross domestic product (GDP);
- it generates both formal and informal employment;
- it supports the livelihoods of millions of citizens; and
- it provides environmental services that support the sustainable operation of other sectors, mainly agriculture (in particular coffee production by smallholder farmers from both natural coffee forests and planted coffee farms – the latter is traditionally considered to be part of the agricultural sector in the country's national accounting system [EFS, 2014]).

4.2 Kenya

"In Kenya the forest sector contributes more benefits to the economy than what is reported in the country's national statistics."

The Kenya National Bureau of Statistics (KNBS) indicated forestry's contribution to GDP to be one percent, which, according to the study of the Forestry Society of Kenya did not take into account other important values, including direct values of both timber and non-timber products in the subsistence economy; the value addition of the transformation of unprocessed roundwood harvested from state forests; the value of cultural services supplied to both residents and tourists; and the value of a supplied set of ecosystem services such as high-quality water, erosion control, stabilization of river banks and siltation (FSK, 2015).

Forests provide basic subsistence for more than a quarter of the population, especially to communities adjacent to forests, in the form of fuelwood, grazing, domestic water and water for irrigation. Similar to Ethiopia, there is a growing awareness of the significance of forest resources and the link between biodiversity, ecosystem services and human well-being. For instance, the charcoal industry has acquired significant economic importance in the country as a result of rapid urbanization. According to FSK it is estimated that the total annual charcoal consumption stands at 1.6 million tons, generating an estimated annual market value of over Ksh32 billion (US$427 million), almost equivalent to Ksh35 billion (US$467 million) from the tea industry.

Natural forests moreover provide a wide range of non-wood forest products ranging from medicinal herbs, honey, meat from trapped animals, fish, fruits, vegetables, fibers, nuts and tubers, which form an important source of food to communities adjacent to forests. These sectors also directly generate employment and provide additional sources of revenue for households (FSK, 2015).

4.3 Uganda

According to the Uganda Forest Association, in terms of ecosystem services alone, forestry benefits have been valued at UGX222 billion, equivalent to US$88.8 million. It was reported that the loss of soil nutrients from farmlands surrounding tropical high forests and forest plantation areas amounted to around 104.2 kg/ha/year, and losses from farmlands surrounding woodlands were estimated to be about 156.81 kg/ha over a period of ten years. It was also estimated that promoting forest regeneration and afforestation could improve soil nutrient protection through avoiding soil erosion under forest cover, which could be worth approximatively UGX671 billion or US$291 million (UFA, 2014). Forests also contribute to the energy supply of the country in the form of charcoal and firewood to over 90 percent of the population; and employ over one million people in the formal sector and almost an equivalent number in the informal sector.

Non-wood forest products (NWFPs) in Uganda are numerous and consist of food products such as food additives; medicinal products; clothing; and products used for house construction, among other uses. These NWFPs play an important role in the national economy and the values associated with these NWFPs, as assessed by the Uganda Forestry Accounts Report, put the total flow of non-wood forest products at UGX65 billion or US$22 million (UFA, 2014).

"In Uganda, like in other countries, the value of benefits derived from forestry services such as watershed protection, biodiversity conservation, sequestration of greenhouse gases and control of soil erosion was not taken into consideration when calculating forestry's contribution to GDP."


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FOREST TRADE VALUES AND INTERPRETATIONS 5

5.1 Wood production and worth

FAO estimates that forest industries contribute more than US$450 billion to national incomes, contributing nearly one percent of the global GDP in 2008 and providing formal employment to 0.5 percent of the global labour force (FAO, 2012).

The forestry sector throughout sub-Saharan Africa is of great importance, due to its significance in subsistence production in rural communities which gives forestry a high share of the GDP of these countries. The sector also provides major sources of income and subsistence benefits, generates informal work opportunities and constitutes reservoirs of economic value that help ameliorate shocks to household incomes, particularly in rural areas.

According to UFA (2014), the percentage share to GDP by forestry was 3.5 percent in 2009. Even without inclusion of ecosystem services, the Preliminary Forest Resource Account in Kenya provides a yearly preliminary estimate of the partial contribution of forestry to the economy of Kenya of 3.6 percent (FSK, 2015). Trading Economics (2015) moreover estimated forest rents in Ethiopia to be 4.84 percent of the GDP in 2011. It is difficult for countries to estimate and include data on forestry activities from both the informal and other non-monetary sectors. If these were to be included, the share of forestry to GDP would be significantly higher (FAO, 2008).

In Ethiopia, total wood production was estimated to increase from 100 718 to 107 943 thousand m^3 between 2005 and 2010. About 97 percent of the total wood production outflow is characterized by fuelwood and charcoal production, while timber and sawn timber contributed a mere three percent. Forest products in Ethiopia are categorized into different subsectors, each contributing to the national GDP. These subsectors are gums and resins, honey, tree seed and seedlings, forest coffee, spices, bamboo, timber and medicinal plants. Timber is the main source of raw material for construction, household utensils and for charcoal production.

"The forestry sector throughout sub-Saharan Africa is of great importance, due to its significance in subsistence production in rural communities which gives forestry a high share of the GDP of these countries."

About 93 percent of households in Ethiopia use biomass fuel as a source of energy. In Addis Ababa, there are approximatively 7 549 different sizes and weights of bags of charcoal supplied to the capital city on a daily basis, which is equivalent to about 68 886 tons of charcoal per year. Although there is an apparent high demand and consumption of fuelwood that negatively impacts forest cover in the country, fuelwood business contributes to the livelihoods of poor and vulnerable groups, especially women engaged in fuelwood collection and trading. For instance, more than 15 000 urban-based women carry approximately 35 percent of the wood fuel requirements of the capital city. For 82 percent of these women, fuelwood collection is their only source of income.

With about 2.9 million hectares of land covered with oleo-gum resin-bearing woodlands, with an estimated annual production potential of over 300 000 metric tons, the contribution of gums and resins to the local economy is significant in terms of employment, income diversification, livestock production and food security in times of emergency.

In Kenya, total wood production was estimated to increase from 54 770 to 56 433 thousand m^3 between 2005 and 2010. Wood and non-wood products from the various forest types are supplied to various sectors in the economy. The major products that are extracted from different types of forests and processed in industries or consumed in households include roundwood, wood fuel and non-timber forest products.

Preliminary results have established that the contribution of the forest sector to the economy is at least three times higher than currently reported in official statistics. The sector provides raw materials with a worth of at least Ksh6.9 billion per year, which is not captured in national accounts. Similarly, the charcoal value-chain trade estimated at Ksh12.4 billion is also not accounted for in the national statistics. The value of food is understated by 1.4 percent. The forestry and logging sectors supply roundwood to the manufacturing sector with a value addition of Ksh21.6 billion. Thus the forestry and logging sector has a multiplier effect of 2.73. The value addition attributed to the water sector is Ksh1.2 billion per year.

In Uganda, total wood production was estimated to increase from 31.6 to 39.1 thousand m^3 between 2005 and 2010. Only one-third (31-34 percent) of the wood production was monetary, directly contributing to national trade and household incomes, while the rest was non-monetary, generally meeting domestic energy needs.

About 79 percent of the total wood production outflow is characterized by fuelwood and charcoal production, while sawn timber production contributed only five percent. The established economic contribution of Uganda's forestry resources was USD1 277 million in 2009, without taking into consideration the contributions of other natural resources that are linked to forestry such as wetlands, fisheries, soils and land since they still remain unknown. Fuelwood, timber, poles and other derivatives from trees are among the products contributing to national GDP by increasing export earnings from products such as paper, plywood and parquets.

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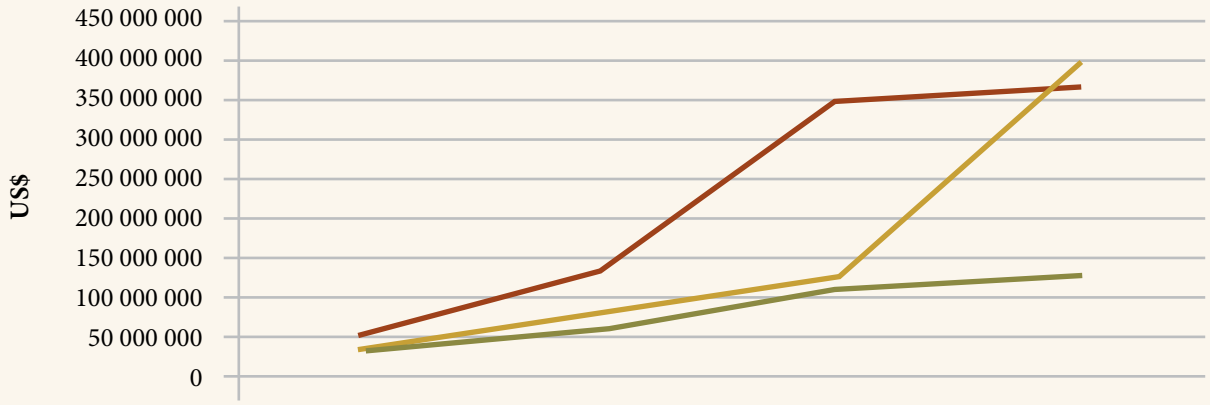
5.2 Trade values

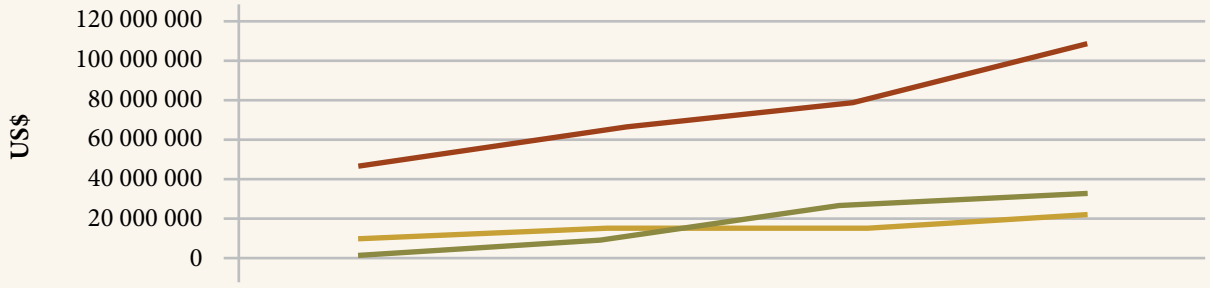
In all three countries (Figure 4) there has been an increasing demand for articles of wood and other wood-derived products such as fuelwood, pulp of wood, and paper and paperboard (UN Comtrade). In Ethiopia for example, the increase in import value is explained by an exponential increase in the demand for paper and paperboard products between 2010 and 2013. Similarly, Kenya's bulk of imports between 2005 and 2010 were paper products, which is attributed to closure of the only paper mill in Kenya (FSK, 2015).



	2000	2005	2010	2013
Ethiopia	31 255 128	78 434 238	125 845 955	388 857 675
Kenya	52 362 006	133 345 616	348 030 412	368 708 239
Uganda	30 778 970	55 264 111	105 116 109	126 666 860

Figure 4: Import value of wood-derived products in Ethiopia, Kenya and Uganda (UN Comtrade, 2015)

Looking at the forestry earnings of the three countries (Figure 5), there has been a steady increase in exported forest products between 2000 and 2013, with products ranging from articles of wood, pulp of wood, gums and resins, paper and paperboard, and plating materials derived from bamboo and rattan (UN Comtrade, 2015).



	2000	2005	2010	2013
Ethiopia	9 869 739	14 888 558	16 539 524	2 199 0510
Kenya	47 026 120	65 595 053	77 215 502	106 610 969
Uganda	642 151	12 143 545	26 812 851	32 818 820

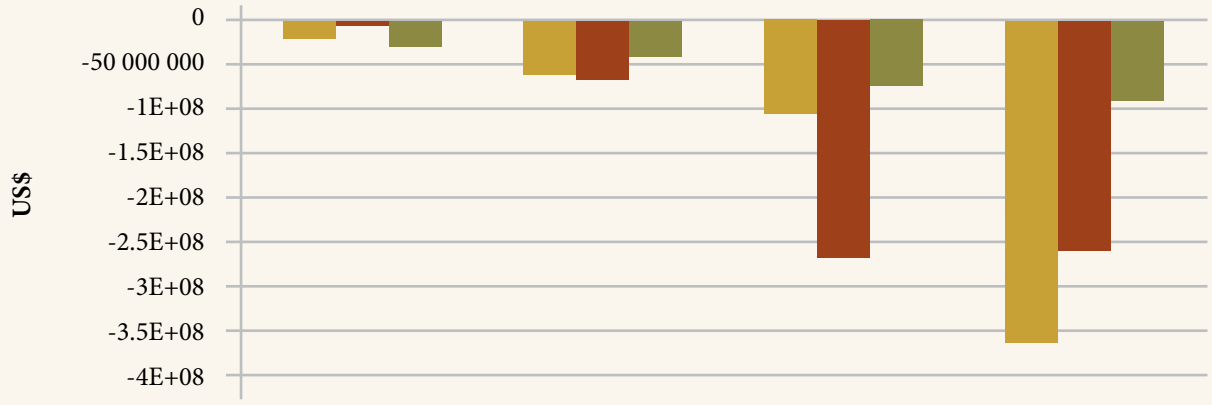
Figure 5: Export value of wood-derived products in Ethiopia, Kenya and Uganda (UN Comtrade, 2015)

In Uganda, the export of rough wood (both coniferous and non-coniferous) is prohibited, unless the value has been added and graded. Those that are recorded are usually timber that has been transiting from neighbouring countries and whose value has been added for re-exportation (UFA, 2014). Ethiopia has a long tradition of exporting natural gums and resins to the rest of the world and these products are the major forest product export commodities for the country (EFS, 2014).

5.3 Interpretation and discussion

Based on the results presented, it seems as if wood production will continue to increase in the years to come. The increase in the population over time will lead to an increased demand for wood products, with a likelihood of undermining national and international forest supplies. Deforestation can limit domestic supply of timber and non-wood products, thereby increasing the import of these products. Decreased forest cover reduces the supply of ecosystem services that provide inputs to both the agriculture and energy sectors. Deforestation has negative social and economic dimensions, and therefore needs to be addressed for its reversal. Although economic valuation of forests is not the ultimate solution to forest degradation, monetary values may inform policy and ring in changes in the sector, as these values will reflect the magnitude of the impacts of deforestation on the economy.

As previously shown in Figures 4 and 5, increasing wood production does not necessarily represent a significant increase in export earnings, as subsistence production is still widely rampant and import values exceed export values. The trade balance in the forestry sector in Figure 6 depicts a negative trend.



	2000	2005	2010	2013
Ethiopia	-21 385 389	-63 545 680	-109 306 431	-366 867 165
Kenya	-5 335 886	-67 750 563	-270 814 910	-262 097 270
Uganda	-30 136 819	-43 120 566	-78 303 258	-93 848 040

Figure 6: Trade balance in the forestry sector between 2000 and 2013 (UN Comtrade, 2015)

However, there seems to be promising signs that these three countries can make improvements within the sector. As the majority of households are still dependent on wood fuel for energy purposes, there is an urgent need for alternatives to fuelwood energy, such as renewable energy. Since the fuelwood business still provides a way of earning income for vulnerable groups, it would be practical to sensitize communities on efficient ways of harvesting charcoal and fuelwood (fire wood), as well as encouraging the creation and management of communal wood lots for household consumption and use. This could drastically relieve pressure on forest cover and support the reforestation and afforestation programmes of these three countries, while at the same time maintaining people's livelihood needs.

Forest and non-forest products can contribute to the national GDP through the creation and maintenance of wood plantations, creation of employment, use of sustainable harvesting practices, improvement in value addition and quality assurance certification. These measures would improve a country's trade balance, while at the same time increasing the interest of those employed in the sector as well as communities to partner with the private sector in order to increase investment in the sector.

The country reports of Ethiopia, Kenya and Uganda state the following major reasons for the declining contribution of forestry to GDP and trade to these countries:

- Incomplete capture of the full valuation of forest resources in the computation of GDP.
- Strong performance from other sectors, such as the services sector.
- Declining export performance owing to market and operational challenges.
- Diversification to domestic market sales – data capture low.

"Forest and non-forest products can contribute to the national GDP through the creation and maintenance of wood plantations, creation of employment, use of sustainable harvesting practices, improvement in value addition and quality assurance certification."

CONCLUSION AND RECOMMENDATIONS 6

Forestry is crucial to the lives of millions of people, especially the poorest section of the society who most critically depends on forest resources for their well-being and survival in the absence of other livelihood assets and opportunities. In order for forests to contribute significantly to sustainable development, there is a need for countries to practice sustainable forest management and to adopt an inter-sectoral approach to optimize benefits from forests. This would ensure that the goods and services derived from forests meet present-day needs while at the same time securing their continued availability and contribution to long-term development through securing forest resources, maintaining or enhancing biodiversity and water quality, promoting healthy and vigorous forests in order to provide protection functions, and promoting alternative livelihoods.

"Forestry is crucial to the lives of millions of people, especially the poorest section of the society who most critically depends on forest resources for their well-being and survival in the absence of other livelihood assets and opportunities."

In many countries, the contribution of the forestry sector to GDP has been stagnant or declining for a long time. This can be attributed to the fact that, with the focus being mainly on timber production, there is a lack of data and information derived from the informal forestry sector. This has constrained the full valuation of forest goods and services. As a result, the contribution of the forestry sector to the economy has been undervalued.

The following are some technical and policy recommendations which can position the forestry sector as an important contributor to the national economy:

- Establish strong forestry institutions to ensure the successful and widespread implementation of sustainable forest management.
- Undertake a standardized countrywide study to come up with effective and more accurate methods of measuring the contribution of forests to GDP and trade.
- Increase forest plantations and investments in processing enterprises and industries in order to increase export earnings, create jobs and add value.
- Conduct comprehensive forest resources assessments for countries in which there is a general scarcity of reliable data on forestry products and the service value chain.

- Assess monetary values of forests in a given country in order to inform policy on the magnitude of the impacts of deforestation on the economy.
- Put in place economic and policy instruments which will bring equity across all forest users.
- Take a cross-sectoral approach to managing forests, as forests do much more than merely providing timber and/or storing carbon.
- Undertake in-depth studies in order to inform detailed costs and benefits associated with forests as a way to assess if actual values attributed to the forestry sector are comparable to costs associated with forest management and conservation.
- Develop capacity to undertake valuation and accounting of environmental services (payment for ecosystem services - PES).
- Take advantage of emerging instruments such as REDD+, as these schemes are increasingly making macro-economic sense for the government to develop concrete policy options that could factor them into national accounts and development planning.
- Develop strong linkages with agriculture, water and energy in achieving food security and tackling poverty.
- Adopt a landscape approach and increase synergies among multiple land-use objectives.

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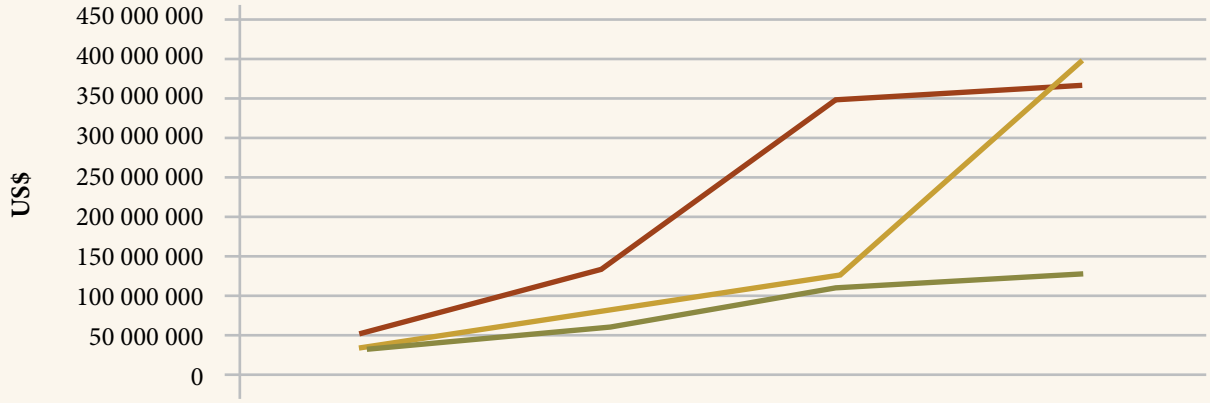
ADDENDUM

Import Values

	2000	2005	2010	2013
Import values from Ethiopia				
Articles of wood	7 048 298	19 286 296	37 373 268	134 671 781
Pulp of wood	3 361 133	3 791 467	3 132 604	13 865 134
Paper and paperboard	20 731 670	55 352 441	85 334 908	239 810 938
Vegetable plaiting materials	114 027	4 034	5 175	509 822
Total	**31 255 128**	**78 434 238**	**125 845 955**	**388 857 675**
Import values from Kenya				
Articles of wood	3 352 638	8 389 998	28 107 793	45 910 191
Pulp of wood	3 131 921	2 284 618	1 672 582	649 796
Paper and paperboard	45 870 088	122 667 331	318 227 291	322 135 211
Vegetable plaiting materials	7 359	3 669	22 746	13 041
Total	**52 362 006**	**133 345 616**	**348 030 412**	**368 708 239**
Import values from Uganda				
Articles of wood	1 832 471	4 020 314	6 290 751	5 892 444
Pulp of wood	9 043	212 812	201 191	410 590
Paper and paperboard	28 937 426	51 029 803	98 622 968	120 363 291
Vegetable plaiting materials	30	1 182	1 199	535
Total	**30 778 970**	**55 264 111**	**105 116 109**	**126 666 860**

Import value of wood-derived products

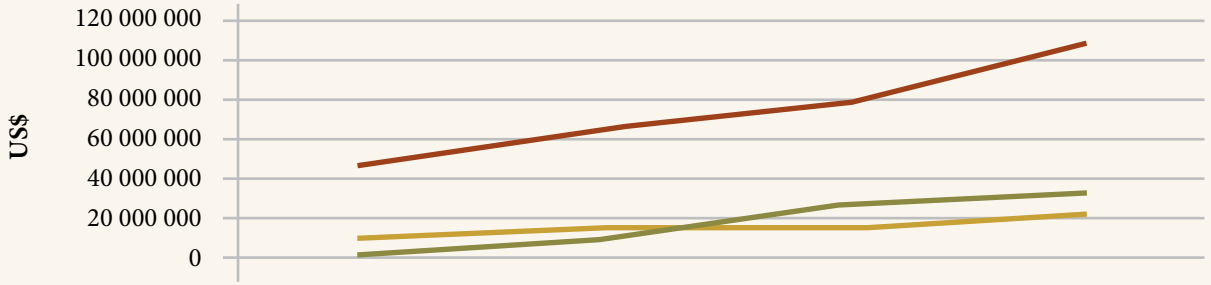


	2000	2005	2010	2013
Ethiopia	31 255 128	78 434 238	125 845 955	388 857 675
Kenya	52 362 006	133 345 616	348 030 412	368 708 239
Uganda	30 778 970	55 264 111	105 116 109	126 666 860

Export Values

	2000	2005	2010	2013
Export values from Ethiopia				
Articles of wood	1 194	300 017	1 484 940	6 833 046
Gums and resins	5 899 848	10 526 617	14 951 072	13 548 911
Paper and paperboard	0	354 574	52 716	73 354
Vegetable plaiting materials	6 917 608	8 708 122	50 796	1 535 199
Total	**12 818 650**	**19 889 330**	**16 539 524**	**21 990 510**
Export values from Kenya				
Articles of wood	11 725 244	11 047 603	10 851 297	30 672 712
Pulp of wood	12 911	4 570	872 597	1 864 944
Gums and resins	9 644 407	15 748 142	2 358 823	2 460 474
Paper and paperboard	25 622 214	38 790 318	63 076 766	71 392 849
Vegetable plaiting materials	21 344	4 420	56 019	219 990
Total	**47 026 120**	**65 595 053**	**77 215 502**	**106 610 969**
Export values from Uganda				
Articles of wood	41 032	1 962 517	7 756 121	12 824 278
Pulp of wood	0	28 119	308 999	1 132 734
Gums and resins	86 054	26 388	78 547	8 191
Paper and paperboard	497 624	2 946 353	10 747 811	18 632 124
Vegetable plaiting materials	17 441	7 180 168	7 921 373	221 493
Total	**642 151**	**12 143 545**	**26 812 851**	**32 818 820**

Export value of wood-derived products

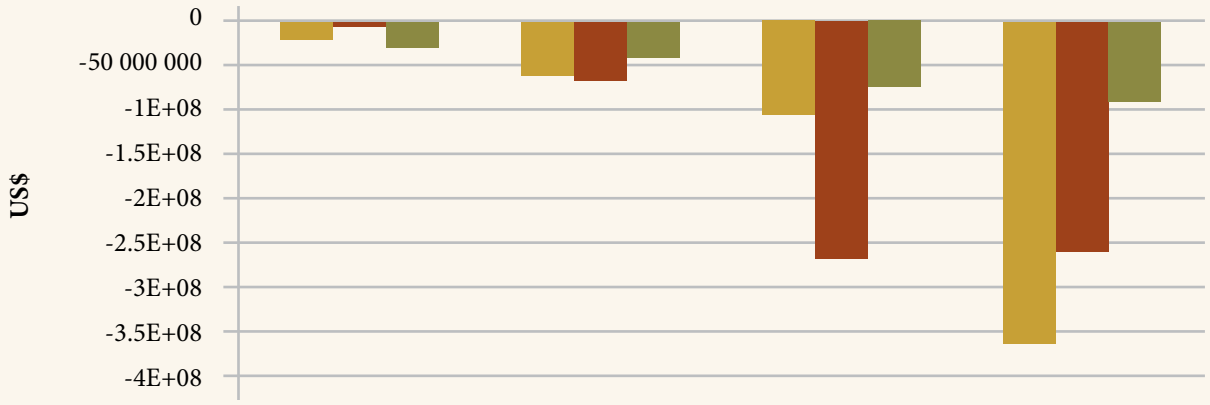


	2000	2005	2010	2013
Ethiopia	9 869 739	14 888 558	16 539 524	2 199 0510
Kenya	47 026 120	65 595 053	77 215 502	106 610 969
Uganda	642 151	12 143 545	26 812 851	32 818 820

Trade Balances

	2000	2005	2010	2013
Trade balance of Ethiopia				
Export	9 869 739	14 888 558	16 539 524	21 990 510
Import	31 255 128	78 434 238	125 845 955	388 857 675
Trade Balance	**-21 385 389**	**-63 545 680**	**-109 306 431**	**-366 867 165**
Trade balance of Kenya				
Export	47 026 120	65 595 053	77 215 502	106 610 969
Import	52 362 006	133 345 616	348 030 412	368 708 239
Trade Balance	**-5 335 886**	**-67 750 563**	**-270 814 910**	**-262 097 270**
Trade balance of Uganda				
Export	642 151	12 143 545	26 812 851	32 818 820
Import	30 778 970	55 264 111	105 116 109	126 666 860
Trade Balance	**-30 136 819**	**-43 120 566**	**-78 303 258**	**-93 848 040**

Trade balance



	2000	2005	2010	2013
Ethiopia	-21 385 389	-63 545 680	-109 306 431	-366 867 165
Kenya	-5 335 886	-67 750 563	-270 814 910	-262 097 270
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Food and Agriculture Organization of the United Nations

This publication was produced by FAO. It aims to showcase the economic contributions of forests in Ethiopia, Kenya and Uganda in order to illustrate the multiple benefits derived from forests and the potential contribution of forests to national economies and GDP.

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