

## Annex 2A.

### ASSESSMENT OF LAND USE, FOREST POLICY AND GOVERNANCE

#### 1.1      2.7    Situation analysis

This section covers major land use trends; it appraises direct and indirect deforestation and degradation drivers in the context of REDD-plus. It identifies land tenure and natural resource rights and relevant governance issues; summarizes past efforts at formulation and implementation of policies or measures for addressing some of the drivers of deforestation and forest degradation; pointing at potentials for improvement, and opportunities to address REDD-plus; and sets the platform for formulation of the country's initial possible REDD strategy options available to address key land use change drivers. The REDD-Plus Strategies described in this proposal are largely based on the information provided in this section.

##### *1.1.1      2.7.1 Land Use in Uganda*

In 1964, Langdale-Brown *et al.* published a land cover and Land Use description of Uganda. They classified Uganda's vegetation communities into 22 main categories, recognizing 94 specific associations. Government of Uganda in 2003 (Forest Department) and 2006 (NFA) published its first and second Biomass Technical Reports respectively. Part of the work involved mapping land cover and its associated land uses. To be able to categorise the different land uses in the country, an assumption that land cover is an attribute of Land Use, was used. This permitted making the linkage between observable characteristics of the landscape (cover) with purposes for which they are used (land use). In the current draft Biomass Technical Report (2010), the 13 land cover/land use classification system is harmonised with FAO's Land Cover Classification System (LCCS) which is being used by FAO AFRICOVER. Thus the 13 land cover/land use categories in the country are summarized in Table 15 below.

Land cover in Uganda has been divided into twelve major cover classes by the National Biomass Unit as outlined in Table 15.

Table 15 Land Cover change in Uganda 1990 and 2005

No.	Land cover type	Area 1990 (ha)	Area 2005 (ha)	Change %
1	Broad leaved	18,682	14,786	-21
2	Conifer	16,384	18,741	-14
3	Tropical High Forest (well stocked)	651,110	600,957	-8
4	Tropical High Forest (low stocked)	273,062	191,694	-30
5	Woodland	3,974,508	2,777,998	-30
6	Bush	1,422,193	2,968,675	109
7	Grassland	5,115,426	4,063,582	-21
8	Wetland	484,030	753,041	56*
9	Small scale farmland	8,400,789	8,847,592	5
10	Large scale farmland	68,447	106,630	56
11	Built up area	36,572	97,270	166
12	Impediments	3741	7,804	109

	Open Water	3,689,603	3,706,489	0
		24,155,246	24,155,347	-

Source: NFA 2009

*\*The observed increase in wetland area is yet to be confirmed by Wetland Management Department, which is using a slightly different classification method*

Natural forest vegetation has declined between 1990 and 2005. In contrast, the area under subsistence agriculture and bush cover increased. Management of woodlands has been generally neglected (Nsita 2010). Although standing biomass (living/above-ground biomass) stocking in woodlands is almost five times lower than that in THF well stocked and over 3 times lower than that in THF low stocked, the widespread loss of woodlands between 1990 and 2005 was equivalent to over five times the biomass loss from THF well stocked. This is equivalent to a loss of about 200,000 ha of THF well stocked compared to the 50,158ha recorded or about one third of the remaining THF well stocked area in 2005.

According to the National Biomass Study, land use changes have influenced changes in biomass cover (Table 16)

Table 16. Biomass changes due to land–use change in Uganda

Vegetation type	Area 2005 (ha)	Difference in area 1990-2005 (ha)	Biomass in standing stock, 2005 (000, tons)	Biomass density in 2005 (tons/ha)	Difference in standing biomass 1990-2005 (000 tons)*
THF well stocked	600,952	-50,153	136,491	227.13	-11,390
THF low stocked	191,694	-81,367	27,596	143.96	-11,710
Woodland	2,777,997	-1,196,510	126,014	45.36	-54,280
Grassland	4,063,581	-1,051,844	46,852	11.53	-12,130
Bush	2,968,675	1,546,482	14,008	4.72	7,300
Wetlands	753,041	269,011	236	0.31	80
Area of the Country	24,155,347				

Adapted from: NFA 2009

Tons = metric tons

\* Assumes no change in stocking density over time

Bush lands, grasslands and wetlands, are not considered to be part of the forest cover, although they contain different forms of trees and shrubs in their landscapes. While expansive loss of grassland also resulted in significant loss of biomass, the expanding bush lands (1990-2005) resulted in very little gain in standing biomass.

Wetlands also increased especially in Teso district because of heavy rains and blockage of drainage into Lake Kyoga (NEMA 2009b). Wetland vegetation is dominated by papyrus, which contains very low living biomass (0.31 tons/ha), but follows a C4 photosynthetic pathway, predicted to sequester about 16 t C/ha/y (Jones and Humphries 2002). Its peat-like sediment contains about 2.5 t C/ha (Mitsch and Bernal, 2008). Wetland vegetation has a neutral to positive overall carbon sequestration effect, balancing its carbon sequestration capacity against its release of methane (op cit). REDD – Plus incentives should be

explored for protection of wetlands against destruction, which exposes accumulated rhizomes to aerobic conditions resulting in a potential net release of 10 t C/ha/y (Jones and Humphries 2002).

### 1.1.2 2.7.2 Assessment of relationship between land use and deforestation and forest degradation

#### 2.7.2.1 Land Tenure

Land tenure in Uganda is regulated under the following legal framework: Constitution of Uganda 1995 (amended 2005), the 1998 Land Act, the Registration of Titles Act and the Customary Land law. Article 237 of the 1995 constitution (amended 2005) provides for the following four forms of land tenure in Uganda: a) Customary; (b) Freehold; (c) *Mailo*; and (d) Leasehold. The 1998 Land Act vests ownership of land in the citizens of Uganda. The Act empowers people to use the land they own but in accordance with other existing laws. This implies that land use ought to recognize the forest policy, Forest Act and Other environmental laws that seek to promote good environmental management.

**Freehold tenure** involves the holding of registered land in perpetuity that enables the holder to exercise full powers of ownership of that land, including using and developing it, and obtaining any produce from it. It also allows the title-holder to enter into any transaction in connection with the land, including selling, leasing, mortgaging or pledging, and subdividing.<sup>1</sup> Most private forests owned by individuals and companies fall on freehold lands.

**Mailo tenure** involves the holding of registered land in perpetuity. It differs from freehold in that it permits the separation of ownership of land from the ownership of developments on land made by a lawful or *bona fide* occupant (lived on land for 12 years or more). It enables the holder, subject to the customary and statutory rights of those persons lawful or *bona fide* in occupation of the land, to exercise all the powers of ownership of land as that under a freehold title.<sup>2</sup>

**Leasehold tenure** is a form of tenure created either by contract or by operation of law; under which one person, namely the landlord or lessor, grants another person, namely the tenant or lessee, exclusive possession of land usually for a period defined, in return for a rent. On expiry of the lease, land tenure reverts to the lessor/landlord. When land under natural vegetation is leased, it is generally for purposes of development (agriculture or construction), which will create returns over the leasehold cycle (maximum 49 years).

**Customary tenure** is a form of land tenure applicable to a specific area of land and a specific class of persons, and is governed by rules generally accepted as binding by the latter. It is applicable to any persons acquiring land in that area in accordance with those rules. Customary tenure is the most common form of land tenure in the rural parts of northern eastern and western Uganda. Land is owned at a tribal level held in trust for the people<sup>3</sup> by a paramount chief in Masindi, Arua Hoima, Buliisa and entire northern region. In Eastern Uganda Customary land is owned at family lineage level. Individuals only have user rights, but not rights of disposal without the permission of the chief/or leader. There is no clear system of registration of members who can lay claim to the land. Individual tenure security

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<sup>1</sup> *ibid.*

<sup>2</sup> *ibid.*

<sup>3</sup> *ibid.*

seems to be dependent on active agriculture or settlement. Land is generally not officially surveyed or registered. Boundaries (marked by natural features such as trees, rivers, valleys etc.) often demarcate only the utilized (agriculture and settlement) part of the land and are mutually known among neighbours.

The various categories of land tenure have the following implications to deforestation and forest degradation (Table 17)

Table 17: Assessment of Land tenure in relation to Deforestation and forest degradation

Category	Implications for Deforestation and Forest degradation
Freehold	Has a significant role in deforestation and forest degradation trends since most privately owned forests and agricultural activities and other developments fall on freehold lands. Enforcement of environmental policies and laws to regulate use of these lands is cumbersome and ineffective in most cases.
Mailo	Has a significant role in deforestation and forest degradation trends especially in the Central region/Lake Victoria and western region where this form of land tenure is dominant. Enforcement of environmental policies and laws to regulate use of these lands is cumbersome and ineffective in most cases. Incentives for forestry resources development and management are weak poor due relationships between Land owners and tenants in as far as security of tenure is concerned.
Leasehold	This category of land tenure ownership in Uganda accounts for a very insignificant proportion of land outside urban areas. Little incentive for leaseholders to invest in forest conservation.
Customary	This is major form of land tenure ownership in Uganda. Most agricultural activities take place on this land. Use of forests and woodlands is virtually open-access, and there is no incentive for an individual's to invest in sustainable practices. Profits from woodlands are low and there are strong benefits from conversion to private tenure and agriculture. It stands as most influential form of land use in terms of deforestation and forest degradation.

### 2.7.2.2 Forest resource rights and implications on REDD

According to Article 43 of the 1998 Land Act, a person who owns or occupies land is required to manage and utilize it in accordance with the existing laws such as those regulating forestry, minerals, environment, water, wetlands and wildlife among others. Therefore, a landowner is the tree owner except in situations where additional arrangements such as leases and licenses have been made. The 2003 National Forestry and Tree Planting Act, classifies forests according to tenure as (a) Central Forest Reserves under National Forest Authority (NFA), b) Forested National Parks under Uganda Wildlife

Authority (UWA); c) Local Forest Reserves under local governments; d) Community Forests under community ownership once declared by the minister; e) Private Forests under private individuals, cultural and traditional institutions; f) Joint Managed Forests usually forming part of a wildlife conservation area under both the UWA and NFA. According to current legal provisions the following arrangements for forest management have direct implications on REDD-Plus (Table 18)

Table 18. Implications of Forest Tenure and management arrangements on REDD.

<i><b>Tenure</b></i>	<i><b>Institution</b></i>	<i><b>Management arrangement</b></i>	<i><b>Main Characteristics</b></i>	<i><b>Implications</b></i>
Central Forest Reserves	National Forestry Authority (NFA)	Strict Nature Reserves (SNRs) and Sites of Special Scientific Interest	<ul style="list-style-type: none"> <li>➤ Large forest blocks</li> <li>➤ Normally located inside forest reserves.</li> <li>➤ Tree felling is prohibited.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Creates and sustains carbon Stock/sink in form of PFE</li> <li>➤ Minimized chances of carbon leakage</li> </ul>
	NFA with other stakeholders	Buffer zones	<ul style="list-style-type: none"> <li>➤ Large forest blocks</li> <li>➤ At least 500-1000 m belts around SNRs</li> <li>➤ Low-impact use</li> </ul>	<ul style="list-style-type: none"> <li>➤ Serve as carbon sink</li> <li>➤ Potential carbon leakage due to tree utilization</li> </ul>
	NFA with private sector/communities	Aforestation/reforestation of CFR production areas	<ul style="list-style-type: none"> <li>➤ Mostly large forest blocks for supply of timber &amp; firewood</li> <li>➤ Some is ear-marked for afforestation/reforestation</li> <li>➤ Large patches are licensed to the private sector;</li> <li>➤ Small patches (&lt; 500 ha) are licensed to individuals or local communities.</li> <li>➤ Licensees have tenure rights for trees they have planted.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provides opportunity for: <ul style="list-style-type: none"> <li>➤ Forest restoration</li> <li>➤ Establishment of forests</li> <li>➤ People/Stakeholder partnerships</li> <li>➤ Biodiversity conservation</li> </ul> </li> </ul>
	NFA with communities	Collaborative Forest Management in CFR Production Areas	<ul style="list-style-type: none"> <li>➤ Small patches in degraded central forest reserve sections adjacent to local communities.</li> <li>➤ Local communities have user rights negotiated via a Collaborative Forest Management Agreement.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provides opportunities for: <ul style="list-style-type: none"> <li>➤ Sustainable forest management</li> <li>➤ Community rights to Carbon not assured</li> </ul> </li> </ul>
Local Forest Reserves	District or sub-county local governments	Local Forest Reserves	<ul style="list-style-type: none"> <li>➤ 4,997 ha<sup>4</sup></li> <li>➤ Small &lt; 500 ha highly degraded forests</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provides opportunity for: <ul style="list-style-type: none"> <li>➤ Forest restoration</li> <li>➤ Establishment of forests</li> <li>➤ People/Stakeholder partnerships</li> <li>➤ Biodiversity conservation</li> </ul> </li> </ul>
Wildlife Conservation areas	Uganda Wildlife Authority	Wildlife Protected Areas - National Parks	<ul style="list-style-type: none"> <li>➤ Adjacent local communities may have user rights negotiated</li> </ul>	<ul style="list-style-type: none"> <li>➤ Provides opportunity for: <ul style="list-style-type: none"> <li>➤ Forest restoration</li> <li>➤ Establishment of forests</li> </ul> </li> </ul>

<sup>4</sup> Second Schedule of the National Tree Planting and Forest Act 2003

		(NP) and Wildlife Reserves (WRs)	via a MoU for Collaborative Resource Management (CRM) in zones not exceeding 20% of the PA.	<ul style="list-style-type: none"> <li>➤ People/Stakeholder partnerships</li> <li>➤ Biodiversity conservation</li> </ul>
	Local community committees under local governments with technical assistance from UWA	Community Wildlife Areas (CWAs)	Can be large forest blocks e.g., Amudat (202,500 ha)	<ul style="list-style-type: none"> <li>➤ Provides opportunities for: <ul style="list-style-type: none"> <li>➤ Sustainable forest management</li> <li>➤ Community rights to Carbon not assured</li> </ul> </li> </ul>
Joint management	UWA and NFA	Joint Management Forest Reserves	Large forest blocks e.g., Bwindi National Park (119,200 ha).	<ul style="list-style-type: none"> <li>➤ Exhibits Institutional Collaboration</li> </ul>
Private Forests	Individuals or institutions outside government	Variable	Mostly small fragmented forest patches. None has been registered yet.	<ul style="list-style-type: none"> <li>➤ Vulnerable to deforestation and forest degradation</li> <li>➤ Opportunity for afforestation</li> <li>➤ Opportunity for participating in REDD+/carbon market</li> </ul>
Community Forests	Potentially CBO, NGO, co-operative society, communal land association (CLA), company, farmers' group, or traditional/cultural institution	Forests on formerly public or government land that are completely under community control	None has been declared by the minister yet.	<ul style="list-style-type: none"> <li>➤ Vulnerable to deforestation and forest degradation</li> <li>➤ Opportunity for afforestation</li> <li>➤ Opportunity for participating in REDD+/carbon market</li> </ul>

### 2.7.2.3 Forests and carbon tenure in Protected Areas

According to the Forest and Tree Planting Act (2004), Central Forest Reserves are managed on behalf of the Ugandan citizens by NFA as semi-autonomous central government statutory body. Local Forest Reserves (4,995 ha) are also managed on behalf of the Ugandan citizens by the Local Governments. Likewise, Forests under management as National parks are held in trust by UWA. This management arrangement introduces the aspect of Trust ship whereby government and these prescribed institutions act as Trustees on behalf of Ugandans. This implies that Carbon stocks within these estates are held in trust by government on behalf of the peoples of Uganda.

Concessions awarded by Government under Section 14 and 41 of the 2004 National Forestry and Tree Planting Act, entitle concession-holders to rights over forest resources within the forest reserves as specified in their licenses or permits. Forest concessions have been awarded to: harvest mature trees in both natural and plantation forests, plant trees develop portions of the forest reserve for forestry functions such as saw-milling and wood processing industries, manage eco-tourism sites, undertake Collaborative Forest Management and extract non-timber forest products for commercial purposes (Kiyangi 2006). This implies that the lessee has right to the trees.

Local communities under formal Collaborative Management arrangements or other bidding arrangements also have access and user rights in forest reserves. The 2001 National Forestry Policy, the 2004 National Forestry and Tree Planting Act, and the 2002 Guidelines for Collaborative Forest Management (CFM) provide for development of ten-year co-management agreements between a Responsible Body (a government entity like NFA or other forest owner) and an organized community group. Under CFM with NFA, the policy and the law are clear that the land and tree tenure of the central forest reserves rests with NFA. In such cases, carbon tenure belongs to the responsible body. NFA also gives the opportunity for CFM communities to acquire a license for 10% of the plantable area within forest reserves. Under the license arrangement, communities own the trees and therefore (presumably) the carbon rights during the licensing period (25 years).

Under the UWA Community Resource Management agreements e.g., between Kamwenge community groups and Queen Elizabeth National Park communities have only access and user rights to the specified forest reserve sections and have no claim on land or tree tenure.

#### **2.7.2.4 Forest and carbon tenure in private forests**

Private Forests (PFs) are all forests outside government-protected areas and not including Community forests. Private forests in Uganda exist on land under freehold, leasehold, *mailo* and customary tenure systems. In all these cases a certificate of title constitutes a *prima-facie* evidence of ownership.<sup>5</sup> Where land is titled, the land tenure is relatively clear except in cases where squatters or *bona fide* occupants are settled on land or in case of land fraud raising conflicts over such land.<sup>6</sup>

Section 21, 22 and 25 of the 2004 National Forestry and Tree Planting (NFTP) Act provide for a forest owner (individual or community group) to register with the district land board their forest on land owned in accordance with the Land Act, or under a license granted by the Act. This provision also includes forests on customary (untitled land). Provided that a forest is registered, the Act states that all produce in that forest belongs to the forest owner and may be used in any manner the owner may determine provided it falls within the management plan and regulations provided under the NFTP Act. Currently however, no Private Forest has been registered in Uganda (Ebeling and Namirembe 2010).

Communal forests are a type of private forests existing on land under customary tenure that is not claimed by an individual, commonly on formerly public land that existed by law before the 1995 Constitution (amended 2005). Forests on these ‘unclaimed lands’ are experiencing the highest threats of deforestation especially in northern and western Uganda.

Communal forests can also be owned by Communal Land Associations (CLAs), constituting local community members that have registered a claim to the land and to manage it as “common property”. Under this category of ownership, registered community groups can legally claim all land, tree and carbon tenure rights. However, although community groups such as Ongo and Alimugonza have completed the process of CLA application, none been endorsed by the minister. Until Private Forests and Community Forests are formalised, clear ownership of rights over trees and carbon is not legally defensible.

Local communities can designate a forest area as a Community Wildlife Area (CWA) under local

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<sup>5</sup> Under the Registration of Titles Act, a certificate of title is a *prima-facie* evidence of ownership.

<sup>6</sup> The 1998 Land Act creates overlapping rights over land by recognizing *bona fide* occupants. Forests on such land are subject of conflicts between the landlords and *bona fide* occupants.

governments. Land and tree tenure under CWAs belongs to the members of the community group.

### 1.1.3 2.7.3 Forestry resources base in Uganda

Forestry resource in Uganda is described in terms of the current status and trends in status of forestry resources base. In addition, trends in deforestation and forest degradation are described in order to trace the likely future state of forestry resources.

#### 2.7.3.1 Status of forestry resources in Uganda

According to National Biomass Study (2005), Uganda's natural forest vegetation, which is the main focus of REDD-Plus, is categorized into three broad types namely Tropical High Forest (THF) well stocked, Tropical High Forest low stocked, and Woodland, covering 3,570,643ha and occupying approximately 15% of Uganda land surface as of 2005 (Table 19). Of these, approximately 15,500ha were of soft wood plantations. There is no reliable information since 2005.

Table 19. Geographical distribution of natural forests in Uganda

Forest type	Extent in 2005 (ha)	District <sup>7</sup> s with > 20,000 ha of forest
Tropical high forests, well stocked	600,956.81	<u>WEST</u> : Kyenjojo (84,000), Bushenyi (68,231), Hoima (58,889), Kibaale (58,268), Kasese (49,794), Bundibugyo (45,612), Kabarole (39,177), Masindi (31,933), Kamwenge (26,769)  <u>CENTRAL</u> : Mukono (63,977), Mpigi (27,170), Kalangala (21,079)
Tropical high forests, Low stocked	191,694.36	
Woodland	2,777,997.8	<u>NORTH</u> : Abim, Ajumani, Amuru, Apac, Arua, Gulu, Kitgum, Kotido, Moroto, Moyo, Nakapiripirit, Nebi, Pader, Yumbe <u>WEST</u> : Bundibugyo, Bushenyi Hoima, Kabarole, Kamwenge, Kasese, Kiruhura, Kyenjojo, Masindi <u>CENTRAL</u> : Kayunga, Kiboga, Mubende, Nakaseke, Nakasongola,

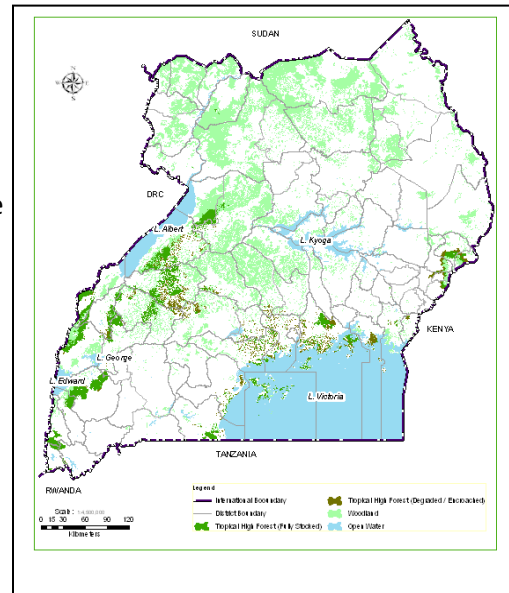
Source: NFA, 2009

<sup>7</sup> Districts names are presented as they were in 2005



Figure 3: Map showing distribution of forest in Uganda.

In terms of geographical spread, well stocked tropical high forests (THF) are mainly in the western part of the country (Bugoma, Budongo, Kibale, Rwenzori Mountains, Kalinzu-Maramagambo, Katsyoha-Kitomi, Bwindi Impenetrable and Mgahinga) and in the east around Mt. Elgon. Low stocked THFs are found around the shores and on the islands of Lake Victoria while woodlands are in the northern central and western regions. The eastern part of the country is largely forest-poor.



Source: NFA (2009)

Over 1,900,000 ha of the forest area is protected under the Permanent Forest Estate (PFE in form of Central Forest Reserves managed by the National Forestry Authority (1,270,797 ha) and National Parks managed by the Uganda Wildlife Authority (731,000 ha), and Local Forest Reserves managed by districts (4,997 ha). Of these Permanent Forest Estate (PFE), 78% (1,468,000 ha) is under forests and woodland, while the rest is mainly grassland (Kayanja and Byaruhanga, 2001). The rest of the forest estate (almost 64% of the total forest cover), which is mostly woodland (Kayanja and Byaruhanga 2001), is under private ownership (State of the Environment Report 2004/5). This is where deforestation and forest degradation mainly occur (Plumptre 2002).

### 2.7.3.2 Trends in status of forest resources in Uganda

Both Uganda and FAO statistics show a decline in forest cover in Uganda, from 10,800,000ha in late 1890 to 4,900,000ha in 1990 and 3,570,643 in 2005. There is no updated data since 2005 although there is concern that the rate of loss of vegetation cover has continued to-date. This presents a decline in forest cover from 35% to less than 15% of Uganda land surface.

Between 1990 and 2005, forest loss was estimated at 88,638 ha/year - approximately 0.7% (7,000 ha/y) in protected areas and 2.27% outside protected areas (NFA 2009). Table 20 shows the districts with the largest forest area lost between 1990 and 2005. Loss of tropical high forests (in hectares) occurred mainly in Kibaale (52,745), Mukono (36,649), Wakiso (24,679), Hoima (16,254) and Mayuge (14,711) over the same period.

Table20: Changes in Forest area in most affected districts (1990-2005).

District	Area lost (ha)	% loss
Kitgum	297,147	63
Kiboga	87,131	52
Amuru	81,406	21
Kibaale	80,585	43
Nakasongola	63,127	49
Hoima	62,250	39
Kamuli	19,998	81
Bugiri	20,297	76

*Source: NFA, 2009*

These changes in forestry resources take place in both protected areas and non-protected areas but with more changes occurring in non-protected areas. By 2002 50% of the tropical high forests (THF) on private lands were degraded and 17% of those in protected areas were degraded. Deforestation occurs mostly in woodlands especially outside protected areas. While degradation drivers are well known, the impact of degradation is not as obvious as for deforestation.

#### *1.1.4 2.7.4 Deforestation and forest degradation in Uganda*

The major causes of deforestation and forest degradation in Uganda relate to largely agrarian human population with increasing numbers and active dynamics, increased demand for variety of forestry resources with limited options for alternatives or substitutes and human capacities to ensure sustainable forest management.

Deforestation and degradation drivers are analysed in the following subsections laying out the extent of threat and levels of success of past interventions

##### **2.7.4.1 Agricultural expansion into forested land**

The key agents are small-scale farmers (88 % of the population of Uganda), immigrants and private large scale monoculture farming (Palm Oil and Sugar Canes).

Between 1990 and 2005, agricultural land area expanded by 2% (from 8,400,789ha to 8,847,591ha mostly in form of small-scale agriculture (NFA 2005). Subsistence agriculture expanded into wetlands, grasslands, and forests (Olson and Berry 2003). Agricultural expansion is the major deforestation driver in Uganda (Knopfle 2008), especially in high population areas or areas with high influx of immigrants. By 2008, there were over 300,000 illegal settlements in central forest reserves.

Outside protected areas, land under natural resource cover is considered to be 'idle'. This has been the case also in west-central (Luwero, Kiboga, Kibale and Masindi districts) and north-eastern parts of the country.

Agricultural interests can sometimes be the primary driver for deforestation and the wood that is cut is used for poles/timber, charcoal production, fuel wood or burned off as waste (Kayanja and Byarugaba 2001). In other instances e.g. well stocked forests near urban centres, agriculture follows degradation from timber, charcoal and fuel wood extraction.

Large-scale agriculture is not so wide-spread, and has increased from 68,446 to 106,630 ha between 1990 and 2005 (NFA 2005), but it has also caused significant threat to forestry. Key examples include the signing over of 7,000 ha of forest on the islands (Bugala and Kalangala) by the Uganda Government to BIDCO for establishment of an oil palm plantation (Foundation for Environmental Security and Sustainability 2006).

The following are the direct agriculture based causes for the current rates and trends of deforestation and forest degradation in Uganda.

- a) **Commercialisation of agriculture:** The expansion of cultivated area into forest and wetlands during the 1990s has been caused by a general increase in agricultural specialization and commercialization. The growing market in non-traditional agricultural exports (maize beans, bananas, ground nuts, simsim, soybean, pepper, vanilla fruits and cut flowers) and the removal of price regulation by government has increased the demand for agricultural land (Kamanyire 2000).

Converting forest land to agriculture pays more. The decision to invest in oil palm plantations at the expense of natural forests in Bugala islands, for example, was based on the International Fund for Agricultural Development (IFAD) study showing that Malaysia's oil palm plantations directly employ many people compared to the few rural people that were not generating much income from the natural forests.

- b) **Poor agricultural practices and resultant soil degradation:** While Uganda's climate offers great potential for food production and economic growth, the country's agriculture, which is predominantly rain fed (UNDP 2007), produces only a quarter to half of potential crop and livestock yields, even with present technologies (NEMA, 2008a). The declining soil fertility, especially in the high potential bimodal rainfall areas in the lakeshore region and in the eastern highlands has also resulted in expansion of agricultural land. Uganda has low fertilizer use because it is not profitable due to poor infrastructure, inadequate advisory support and low market access. Organic practices are too labour intensive and can only be achieved on small land parcels.
- c) **Weak extension system:** The poor have limited options for agricultural intensification since they are often excluded from programmes that improve agricultural productivity (e.g., NAADS - improved seeds, fertilizers and mechanisation) and commercialization. Therefore they tend to expand or practice shifting agriculture. Cultivation methods on steep slopes are generally poor (Knapen *et. al.* 2006) as smallholder farmers lack the institutions, resources or incentives to construct soil conservation structures such as embankments and terraces (NEMA 2006).
- d) **Problem animal control:** Forests are cleared to remove habitats of crop-destroying animals (mainly monkeys, baboons and wild pigs). The campaign for growing upland rice in recent years, for example, caused substantial destruction of forests and trees to remove nesting areas for birds. However, cutting trees and forests reduces on the amount of food available to these animals in their natural habitats and therefore results in increased crop raiding, hence the need for more land to produce enough. Problem animals therefore are a cause and effect of forest degradation.

- e) **Culture:** For the better off people, agricultural land is sometimes expanded due to need for income, prestige, accumulation of assets.

The following interventions are ongoing to address agriculture based drivers of deforestation and forest degradation.

- a) **Management of Forest Estates:** Eviction of agricultural encroachers has been the most common method of controlling agricultural expansion into forests. Out of the 240,000 ha occupied by encroachers in Central Forest Reserves countrywide, NFA has only managed to recover 372 ha. There is an inability of the responsible institutions to protect forests from crimes due to weak institutional capacities (i.e. human, financial and technical resources) and political involvement in handling illegal activities. Clear demarcation of forest boundaries has also been used to curb agricultural encroachment, but this has achieved mixed results as any forest patches outside the boundaries are quickly removed.
- b) **Developing Strategy and guidelines** for nationwide Tree planting and forest land restoration and for Plantation establishment in forest reserves.

#### 2.7.4.2 Population growth

The primary cause of agricultural expansion is the demand for more land to meet the increasing demand for food for a growing population (UFRIC 2002; Nagujja 2001). In the eastern region, population density is highest in the highlands. For example, Bududa district has a population density of 952 persons/km<sup>2</sup> compared to the national average of 124 people/km<sup>2</sup>.

Information from REDD-Plus consultations indicates that local people migrate from densely populated areas to settle and establish agricultural fields in forested lands especially in the Albertine region (Hoima, Masindi and Bulisa).

#### 2.7.4.3 Unsustainable cutting of trees for charcoal

Charcoal is produced through selective removal of trees. *Combretum* spp., *Acacia* spp., *Albizia* spp, *Terminalia* spp, *Azela africana*, *Piliostigma thonningii* are mainly targeted as they make the highest quality charcoal. However, the species range has expanded to include also highly valuable fruit trees like mango, jack fruit and shea butter. In the recent years, charcoal extraction has risen to unsustainable levels resulting in forest degradation and deforestation, especially in the woodlands.

The FAO-FOSA study in 1995 estimated an annual increase of 6% in charcoal production, with a total of around 400,000 tons per year. Between 1996 and 1997, charcoal production increased by 7% from 418,000 tons to 447,000 tons (State of Environment Report for Uganda 1998). Charcoal consumption in Kampala, the main consumer, increased from 200,000 tons in 1995 to 300,000 tons in 2004 (Kisakye 2004). Another key demand point for Ugandan charcoal (mostly from Zuka forest in West Nile) is Southern Sudan, which is emerging from war and has disposable income. Kampala charcoal is mainly from Luwero and Nakaseke (25.3%), Nakasongola (14.5%), Kiboga 13.6%, Mpigi 10.8% and Masindi 6.9% (Kisakye 2004). Other charcoal producing districts are Kapchorwa, Buikwe, Mubende, Mityana, Masaka, Lyantonde, Sembabule and Mpigi supplying Jinja, Entebbe, Wakiso and Mbale.

The majority of wood for making charcoal comes from private or community-owned land. However, as the trees are getting rapidly depleted and as land owners are charging more for harvesting of trees from their land (Knopfle 2008), an increasing amount of wood is obtained (often illegally) from forest reserves. Charcoal is sometimes a bi-product of clearance of land for agriculture. For every 4 ha cleared, 1 ha is used for charcoal (Kayanja and Byarugaba 2001).

Despite being mostly illegal, the combined earning from charcoal by local governments and the Forest Department in 1995 was about US\$ 8m in form of charcoal movement licenses and permits (Sankayan and Hofstad 2000). By 2008, charcoal contributed US\$ 20m/y in rural income (Knopfle 2008). There are over 20,000 people employed in production, transport, distribution and marketing (Kayanja and Byarugaba 2001).

Agents are mainly young men with limited basic education and skills in alternative income generation. These men are often poor with little access to land and credit. Increasingly, larger businessmen are getting involved in charcoal production. The key players in the Charcoal production and transactions are charcoal dealers (producers, transporters and traders).

The following are factors responsible for charcoal production and resultant effect of forestry resources in Uganda.

- a) **High demand:** The charcoal business has been growing due to the increasing demand, mainly (70%) by the growing urban population.
- b) **Infrastructure development:** Indirectly, the increased road access and large numbers of youth with little basic education and limited access to formal employment contribute to the growth in charcoal business.
- c) **Limited access to alternative sources of energy:** Although hydropower infrastructure exists in most urban centres, the unreliable supply and heavy tariffs force the population to rely mostly on charcoal for cooking. Grid access covers only 5% of the whole country and connection reaches only 200,000 people countrywide (Energy Policy for Uganda (2002)). Charcoal on the other hand is abundant and believed to be relatively affordable although a recent energy research, found that the cost of using charcoal over a month is the same as that for electricity excluding the cost of installing electrical appliances.
- d) **Price:** The price of charcoal is too low at UGX 6,000 at the kiln site, and up to UGX 30,000 in Kampala per bag of approximately 50 kg. This reflects mainly the labour, handling and transportation investment, but not the value of the wood itself. Producers pay as little as UGX 400/bag to produce charcoal from private idle land (Knopfle 2008). License costs are negligible at only UGX 36,000/month for production and UGX 62,000/lorryful for transportation (Knopfle 2008). Charcoal production is easy for resource poor people as it only requires labour investment and has lower economic risk than agriculture.
- e) **Weak regulation:** No clear strategy has been made for charcoal in the National Development Plan (2010). Regulation of charcoal production and movement is inadequate and unclear. Ideally, in order to fell trees for charcoal from forest reserves, producers must obtain licenses from either the National Forestry Authority (NFA) or the District Forest Services. For trees felled from private forests, producers are required to obtain consent from the tree owner as well as from the district

officers, who advise on what is permissible according to the district environment plan. In addition, a movement permit should be obtained from the District Forest Officer in the district of origin in order to move the charcoal. This multiplicity of institutions regulating the same resource is confusing and prone to abuse both by the producers and government officials.

- f) **Poor technology:** The most common kiln used is the earth mound constructed at the site of tree felling in order to avoid transportation costs of unprocessed wood. The earth kiln has very low recovery rate of only about 10–22% calculated using oven-dry wood with 0% water content (Adam 2009). However, in most cases, charcoal conversion efficiency is not more than 10%. Poor charcoal handling also leads to further loss. Bags are often smashed on the ground while reloading or offloading increasing the proportion small pieces of charcoal called fines (the acceptable amount is only 5%) (Knopfle 2004).

The following interventions are being undertaken to address charcoal production and marketing.

- a) **Introduction of MBA-CASA kilns** with charcoal yield efficiency between 30-35% in Luweero, Masindi and Nakasongola districts (Knopfle 2004). These were not adopted as they are expensive to construct. Also because they are not mobile, they result into increased transportation costs, which the producers cannot afford. The Ministry of Energy is organizing youths in Nakasongola to regulate one another in the production of charcoal and to form cooperatives that will enable them to obtain licenses and operate legally and get better prices.
- b) **Strategies for sustainable charcoal production** and for promoting **energy saving stoves** have been developed by the Ministry of Energy and Mineral Development (MEMD). Promotion of efficient charcoal cook stoves has also been supplemented by NGOs and Development agencies. At household level, fuel-efficient charcoal stoves are getting increasingly used in urban areas and in the long run, these should contribute to reduced demand for charcoal. A study by UNIQUE Forestry Consultants (2006) showed that these initiatives by the government, private sector and NGOs to improve wood/charcoal production and use efficiency have started to have an impact. The impact of these interventions on charcoal producers and industrial consumers is not yet evident.
- c) **Promotion of efficient charcoal production kilns** (achieving up to 27% efficiency) in Kiboga, Luwero, Nakaseke, and Nakasongola by MEMD resulted in low uptake because the technology was expensive and involved permanent structures yet charcoal burners were nomadic. Other MEMD interventions to provide alternative energy sources include: Rural Electrification at district headquarters, institutions, agro-processing industries and fish landing sites; promotion of biogas technologies and solar energy. However, overall, only about 1 % of Ugandans use these forms of energy. The adoption is limited by the high upfront costs and limited operation and maintenance capacity.
- d) The **Green police** have just been established to enforce environmental laws and their operations are yet to start.

#### 2.7.4.4 Unsustainable cutting of trees for firewood

Uganda consumes 16-18 million tonnes of firewood annually (or annual per capita consumption of 0.6 tonnes of air-dried wood (Kayanja and Byarugaba 2001). The major players are the rural households, youth and commercial dealers.

Firewood consumption is highest in rural areas, but is also substantial in urban areas, commonly using the highly inefficient three-stone fire place. It is mostly a free resource in rural areas. Firewood is also the main energy source for businesses such as lime production, fish smoking, schools, hospitals, prisons and barracks, bakeries, tobacco curing and brick-making.

Fuel wood for cooking comes mostly from farmland (48%), bush land (30%) woodlands (20%) and natural forest (2%). Commercial fuel wood for small industries comes from woodlands 58.9% (mainly in Mbarara, Lira, Nakasongola, Kumi and Adjumani Districts) and 34.6% is collected from plantation/planted forests (mainly from Masaka, Bushenyi and Kasese Districts) (Kayanja and Byarugaba 2001; Draft National Forest Plan, July 2010).

In the central, western and south western parts of the country, firewood extraction does not seem to be a very high threat to deforestation and forest degradation and in most cases; the existing regulation of forest access by rural families is working well. It is the commercial extraction for small and medium scale industry as well as urban households that are causing deforestation and forest degradation. However, in northern and eastern districts (e.g. Tororo, Iganga, Nakasongola, Maracha, Arua, Soroti, Kumi, Palisa, Rakai, Adjumani) firewood scarcity has escalated resulting in more than double the distance walked by women and children from 0.73 km in 2000 (Poverty Eradication Action Plan - PEAP, 2004/5-2007/8), to 1.5 km (APRM 2007). In some instances agricultural residues, which would have replenished soil nutrients are used for energy. From the FIEFOC 2007 survey, only about 20% of the households use fuel-saving technologies.

The following factors contribute towards the unsustainable harvesting of firewood from Uganda Forests.

- a) **Income generation:** Firewood selling offers an alternative source of income to many rural households. In Karamoja, income generated from selling firewood ensures food security (Lüdecke et al. 2004).
- b) **Concentration of people in internally displaced camps:** Severe deforestation has been observed in northern Uganda especially in a radius of 5-8 km around IDPs. All trees are converted to fuel wood including the *Borassus* palm and the high value Shea butter nut tree.
- c) **Growing energy demand by the small and medium industries:** Firewood demand has escalated due to expanding businesses especially tobacco and fish smoking, bakeries, brick-making, charcoal making and institutions such as schools and hospitals.
- d) **Weak enforcement of laws governing firewood harvesting especially from private forests:** Firewood is often considered to be a minor forest product and not strongly regulated.
- e) **Wasteful utilization:** There are no processes to enforce use of more efficient firewood technologies in homes, institutions and industries.

The following **interventions** are being undertaken to address firewood production and marketing.

- a) To reduce demand for firewood, energy efficient stoves are mainly promoted by NGOs/CSOs country wide. However it is only effective if each household uses such stoves. It also requires households to have alternative and more attractive income-generating ventures to work effectively (Okello Bioenergy lists).
- b) Tree planting and establishment of woodlots by farmers, government institutions and commercial users such as tea factories.
- c) Rural electrification programmes by government
- d) Promotion of alternative forms of household energy e.g., biogas.

#### 2.7.4.5 Unsustainable harvesting of timber

Timber harvesting is a key driver for deforestation and forest degradation in Uganda. It is often the first step in forest conversion. In central forest reserves the process often ends at charcoal and fuel wood extraction resulting in degradation, but in some cases, agricultural farms ensue. Although logging used to target only a few species in the past, it has become increasingly indiscriminate and affects a wide range of species and tree age classes. Logging has therefore become severe enough to prevent forest recovery.

The demand for timber was estimated at 750,000 m<sup>3</sup>/year (Kayanja and Byarugaba 2001) compared to the current sustainable timber harvesting levels of 53,000m<sup>3</sup>/year over the next 30 years in central forest reserves. Illegal timber extraction is one of the major drivers of deforestation and forest degradation in central forest reserves. Most timber is extracted mainly from private lands using wasteful methods. The MWE estimates that timber production from private owned forests will be exhausted by 2013. Timber sources include THFs (280,000 m<sup>3</sup>/year), plantations (100,000 m<sup>3</sup>/year) and woodlands (19,300,000 m<sup>3</sup>/year) on government and private land (FAO, 2005). Timber markets are mainly domestic and key destination points are urban centres (Kampala, Entebbe, Masaka, Jinja, Mbale, Mbarara, Gulu, Arua, Kabale, Fort Portal, Soroti and Tororo). There is also a considerable volume of illegal timber imported into the market.

Legal timber production from natural forest in CFRs comes from timber production zones<sup>8</sup> totalling 141,000 ha<sup>9</sup>. Of the approximately 300,000 ha of THF under NFA, about 100,000–200,000 ha can be considered to be “productive” and only 50,000 ha of this is exploitable.

In general, however, records of timber volumes cut and traded whether legally or illegally are incomplete. Timber from private forests is estimated based on only the movement permits, and excludes timber sold within districts. Also the volume of illegal timber is often underestimated based on the figures of those confiscated. In 1999, 715,000 m<sup>3</sup> of illegal timber was confiscated<sup>10</sup> by the Forest Department (FAO 2005).

The key **agents** of unsustainable timber harvesting are the Pit sawyers who supply over 90% of the sawn timber, mainly from natural forests (FAO, 2005). The current management of central forest reserves favours “low-impact harvesting practices” in natural forests - the maximum allowed off-take under a typical license is 15 m<sup>3</sup>/ha in bole volume, or 5-6 trees/ha. This suits the low-investment pit-sawing with annual timber output of only about 25–50 m<sup>3</sup>. Since pit-sawn timber is converted at the stumps and head-hauled from forest, pit-sawing avoids construction of skid roads and use of heavy and expensive tractors or log-transporter trucks. It is considered to be eco-friendly and pro-poor, like the commercial high investment model, although it tends to cream the forests of very high value timber species. Saw millers supply only about 10% of the total timber and this comes mainly from forest plantations.

The following factors contribute to the unsustainable harvesting of timber from Uganda’s forests.

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<sup>8</sup> The Forest Nature Conservation Master Plan (FNCMP) divides Uganda’s forest reserves into three management zones: 50% of the THF FRs comprises timber production zone, 30% buffer zones and 20% is set aside as strict nature reserve.

<sup>9</sup> FAO (2005) supra

<sup>10</sup> Kayanja and Byarugaba (2001)



- a) ***Demand and market for timber:*** has almost doubled mainly due to the expanding construction and furniture industries. The urban construction industry has grown at an average of 11% over the last 3 years leading to high demand of timber, poles, and furniture. The MWE (2009) estimates the country's demand for timber to be 750,000m<sup>3</sup>/year compared to the 200,000 m<sup>3</sup> consumed in 1999. This demand is projected to rise to 1.5 million m<sup>3</sup> by 2025<sup>11</sup>. Despite a ban on timber exports, Kenya and now Southern Sudan are key market destinations for Ugandan hardwoods. The price of timber has escalated.
- b) ***Wasteful methods of wood conversion:*** Pit-sawing results in timber recovery of only 20-40% of the tree. The mobile circular sawmills can also be wasteful. Sometimes even the highly wasteful chain saws are used for converting wood.
- c) ***National or regional guidelines and standards:*** to guide timber harvesting and processing are unavailable. Certification of forests and labelling of forest produce to verify its legal origin from sustainable sources of supply had been included under Section 92, Subsection 2v of the Draft Forest Regulations of 2003 but these Regulations have not been gazetted by the Minister.
- d) ***High operating costs for legal harvest of timber:*** Adokonyero (2005) found that the total operating costs (i.e. sum total of the concession/licence fee, royalty and transporting timber) of pit-sawing in CFRs of UGX 275,800/m<sup>3</sup> exceeds the average sale price of UGX 200,000/m<sup>3</sup>. The majority of pit-sawyers, therefore, operate on private land or illegally.
- e) ***Inadequate management planning:*** Out of 506 forest reserves under NFA, only 12 have approved forest management plans, the rest are in draft form. Even then, management plans are not implemented adequately because of lack of resources. The staff on the ground is not adequate to effectively implement management plans. For example, there are only 5 NFA staff members to manage the 499 km<sup>2</sup> of Kasyoha-Kitomi forest reserve. On the other hand, the lack of institutional coordination of the DFS has led to a fragmented approach to private forest management where forestry officials in each district are completely disjointed from their counterparts. Many DFS positions are not filled nor have staff with inadequate skills. Staff is often poorly paid and not adequately facilitated to conduct their duties.
- f) ***Revenue generation:*** Districts have focused on generating local revenue from timber rather than providing advisory support for sustainable private forest management. For example Bushenyi district leadership gladly license heavy timber production - about 20 Lorries of timber/day to Kampala.
- g) ***Unclear legislation:*** The forest law does not sufficiently control harvesting timber from private forests. According to the law, there is no requirement for owners of forest outside protected area boundaries to seek authorization for harvesting a few trees from their own land or clearing it for agriculture. For harvesting trees for commercial timber from a large area, however, a forest owner (individual or community) must be authorized by the district forest officer. No formal proof of land ownership is required. Some district officials have exploited this gap to register pit-sawyers to harvest timber from local forest reserves and to clear timber from central forest reserves. Also the recently introduced use of *special hammers* by NFA and URA is still confusing – DFS have found themselves clearing timber from CFRs and vice versa. DFS tend to levy extra charges from private tree owners including felling fees and a timber royalty fee of UGX 3000/tree. Over-regulation of timber markets also creates avenues for corruption and bribery.

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<sup>11</sup> MWE (2009)

- h) **Mistrust:** Timber concessions are often given to businesses from other locations and not to local people. This has fuelled mistrust of forest officials leading to escalation of illegal logging and conflict. Cases of communities attacking forest officers have escalated as witnessed in Jubia FR (January 2009) and in Buikwe FR (June 2009)

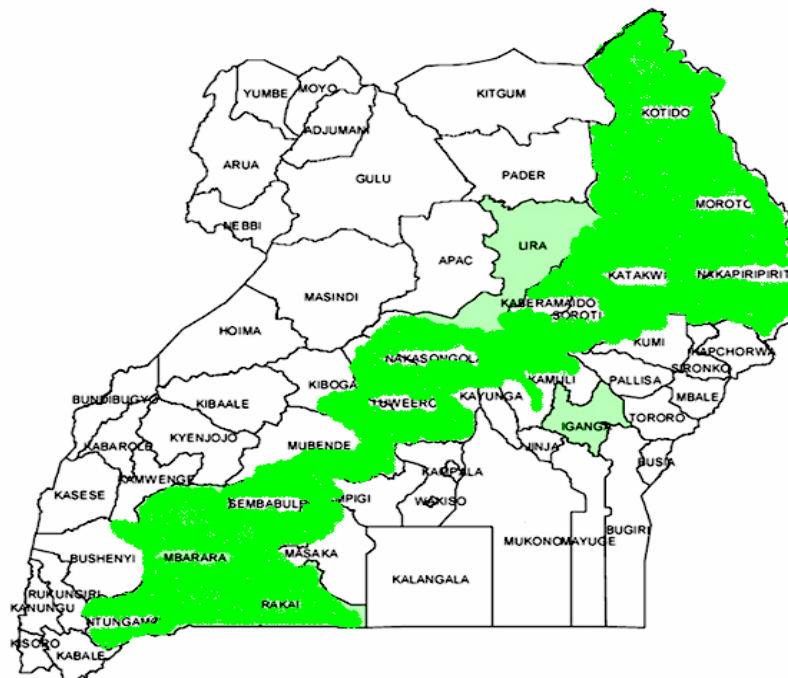
The following **interventions** aimed at regulating timber harvesting are ongoing:

- a) Management zoning of central forest reserves, into the 20% Strict Nature Reserves, 30% buffer zone and 50% timber production zones has had significant success in controlling timber harvesting.
- b) The ban by NFA on use of chain saws to produce timber has also been successful to a large extent in combating over-harvesting of timber and its effectiveness could be greatly enhanced if the occasional notes given by officials to make exceptions to this ban are totally halted.
- c) Collaborative forest management has resulted in protection of forests through social pressure, but it is not wide spread and is likely to be short-lived due to inadequate benefit sharing.
- d) The NFA produces periodic land-cover assessment reports and maps to guide forest planning and management. This needs to be made more accessible for users – by creating awareness and reducing/removing the cost for the information. The NFA itself needs to use this information to develop management plans for all its reserves.
- e) The NFA and URA track timber by conducting impromptu operations on timber outlets in Kampala to capture ‘illegal’ timber (not bearing a NFA or URA stamp). These operations unfortunately tend to also confiscate legal timber from private forests. Apparently, this activity is outside NFA’s mandate as controlling, tracking and restricting timber movement within the country should be by Order of the relevant Minister through a Statutory instrument (Section 45 of the forest law). The Green Police that has been established should be able to take over this role effectively.
- f) Private sector interest in forest management has been increased through licensing reserve land for private tree growing and selling high quality seedlings. The Saw log Production Grant Scheme, providing a fifty percent subsidy for establishment of timber plantations has been successful and is expected to play a key role in reducing pressure on natural forests. Timber certification programs are getting initiated. However, all these are targeting plantations and have not been attempted in ensuring sustainable timber management in natural forests.
- g) Donor-funded projects such Farm Income Enhancement and Forest Conservation (FIEFOC); Mt. Elgon Regional Ecosystem Conservation (MERECF); LVMP and PrimeWest have focused more on tree planting and not really on timber control and regulation.
- h) NFA has worked with civil society organizations to curb illegal timber harvesting. For example, earlier in 2010, forestry officials working with an NGO called Forestry Concern Uganda impounded about 10 trucks carrying illegal timber using forged documents. The timber had been illegally cut from forests in Mpigi, Mukono, Kayunga, Masaka and Mityana districts.

#### **2.7.4.6 Livestock grazing and bush burning**

The responsible agents are nomadic herdsman, ranchers and hunters. Nomadic livestock grazing is not a major deforestation and forest degradation driver in Uganda since in addition to forest vegetation; it relies also on bush land, grassland and wetland vegetation. Cattle-raiding tribes e.g., in Karamoja occasionally cause destructive forest fires. Cattle population grew from 7.5 million in 2005/6 to 11.8 million in 2008 (UBOS 2008). Cattle population is distributed as 22.3% in western region, 21.8% in eastern Uganda 21.7% in central region, 19.8% in Karamoja and 14.4% in northern Uganda (UBOS 2008). In a study by International Food Policy Research Institute (IFPRI) (Benson and Mugarura 2010), the correlation between livestock population and woodlands was low because of the less-than-ideal pasture in such landscapes and tsetse-related constraints in some areas.

Figure 43. The cattle corridor in Uganda



Source: From Uganda Investment Authority, (2009).

The following factors contribute to the trends in deforestation and forest degradation due to grazing pressures.

- a) Wild fire (by hunters and livestock herders) was highlighted as a driver of deforestation/forest degradation during REDD-Plus consultations. According to Nangendo (2005), fire in Budongo woodlands is often of low intensity and well managed on small patches, leading to low carbon woodlands mainly consisting of fire-tolerant species. The study also shows that the control of fire results in succession of fire tolerant woodlands by closed forest vegetation (higher carbon stocking) with tree species that are less adapted to fire. However, fire is a massive problem in many landscapes, such as northern Uganda. It is often high intensity and destructive. Districts even addressed improving fire management as their priority in their SEAPs which WCS supports in some sub counties in the North. Studies are needed to show the extent to which these fires affect forest cover.
- b) Pasture improvement causes forest degradation especially in the woodlands where fire and selective tree cutting are done occasionally to increase pasture growth.

The ongoing interventions seeking to address this problem include:

- a) Increasing access to water for livestock: government has programmes to construct valley dams to settle pastoral communities.
- b) Development of bye-laws by local governments to regulate bush fires.
- c) Civic or environmental education by civil society.

#### **2.7.4.7 Other drivers of deforestation and forest degradation**

There is insufficient information on the impact of other deforestation/forest degradation drivers such as urbanization, oil exploration. Studies are needed to establish the impact of these drivers and whether they can be addressed through REDD.

#### **2.7.4.8 Conclusion on drivers for deforestation and forest degradation**

Previous efforts to achieve sustainable forest management through controlled rates of deforestation and forest degradation have not been successful due to several factors including weaknesses in the enforcement of law and policy and regulation of use of forest resources. In recent past, institutional

reforms such as decentralized management of forest reserves have not been effective in achieving their mandates. Over-all, efforts to reduce deforestation and forest degradation in Uganda should seek to address political interests, institutional capacities and credibility, population pressures, benefits sharing, tenure of land and tree resources, alternatives to forestry resources, and competitiveness of forestry resource and, consistent and effective law enforcement.

### *1.1.5 2.7.5 Assessment of Policy and Governance*

#### **2.7.5.1 Policy, legal and institutional frameworks for REDD-Plus**

REDD-Plus entails Sustainable Forest Management actions involving a series of stakeholders thus requiring a robust institutional governance system and quality control at all governance levels. In addition, REDD-Plus shall involve critical activities such as monitoring effects of REDD - Plus Strategy on Forestry resource in Uganda, Carbon fund management and channelling that require high levels of transparency and accountability. These activities require strong legal and policy framework to regulate or govern them so as to ensure truthful reporting and attribution of changes to activities and also to particular stakeholders.

Lastly, there is need for clear understanding of the causes and implications of current performance levels of forest governance in Uganda in order to develop appropriate strategies for safeguarding forest dependent people and other vulnerable groups from likely effects of REDD-Plus Strategy implementation.

The following sub-sections briefly discuss the legal and policy framework in relation to REDD-Plus. Details about these frameworks are found in Appendix 2(a).

#### **a) National policy, legal**

The Constitution of Uganda (amended 2005) is the supreme framework on sustainable forest management while the 2001 National Forestry Policy and the 2004 National Forestry and Tree Planting Act provide the principle framework. Other subsidiary laws relating to forestry management include: Wildlife Act, cap 200, Local Government Act (1998), Land Act, cap 227, National Environment Management Policy (1995), National Environment Act, cap 153, among others.

These frameworks are supported by several guidelines issued from time to time by lead agencies, e.g., Private Forest Registration Guidelines and the Collaborative Forest Management Guidelines developed by NFA<sup>12</sup>. In addition the District Forestry Services Handbook was drafted but it has not been adopted as an official guide for the operation of the DFS.

Uganda has changed its development strategy from a “Poverty-reduction Strategy” to an “Enterprise Approach”. The National Development Plan (2010-2015) categorizes forestry as a primary growth sector with prospects for investment both from the national budget and the private sector. The National

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<sup>12</sup> These guidelines are not binding because they have not been gazette.

Development Plan emphasizes “sustainable development through preservation of natural resources such as forests ...” The Uganda government draft Vision 2035 is explicit on carbon trading as a means of conserving forests for climate change mitigation.<sup>13</sup> It provides that Uganda will promote carbon trade that will increase forest cover, as well as incomes of the rural communities. It further provides for promotion of conservation programs that will not only restore but also sustain an optimum level of forest cover in the country.

In general, the existing policies and legislation seem to provide adequate basis for REDD - Plus. Where weaknesses exist, they stem from weak implementation of policy and enforcement of law and mismanagement of institutional mandates. The following (Table 21) presents a summary of the analysis of key legal, policy and development frameworks in relation to REDD-Plus.

Table 21: Summary of Policy and Legal provisions for REDD - Plus

Framework	Provisions Relevance to R-PP
<b>Legal frameworks</b>	
The Constitution of Republic of Uganda	<ul style="list-style-type: none"> <li>➤ Protection of Uganda’s natural resources including Forests</li> <li>➤ Ownership of natural resources by Ugandans and creation of trusteeship arrangements</li> </ul>
Forestry and Planting Act	<ul style="list-style-type: none"> <li>➤ Legal framework for management of forest resources in Forest Reserves</li> <li>➤ Stakeholder participation</li> <li>➤ Sustainable forest management</li> <li>➤ Promotion of farm forestry</li> <li>➤ Establishes Joint management arrangements</li> </ul>
Wildlife Act	<ul style="list-style-type: none"> <li>➤ Legal framework for management of forest resources in wildlife conservation areas</li> <li>➤ Incentives including sharing of benefits from conservation of forests</li> <li>➤ Stakeholder participation</li> </ul>
Local Government Act	<ul style="list-style-type: none"> <li>➤ Stakeholder participation</li> <li>➤ Decentralised (devolved) management of Local forest reserves</li> <li>➤ Carrying out Forestry Extension services</li> <li>➤ Regulating Private Forests and Community Forests</li> </ul>
National Environment Act	<ul style="list-style-type: none"> <li>➤ Environmental standards</li> <li>➤ Incentives including sharing of benefits from conservation</li> <li>➤ Stakeholder participation</li> </ul>
Land Act	<ul style="list-style-type: none"> <li>➤ Stakeholder participation</li> <li>➤ Tenure of trees and Forests</li> </ul>
<b>Policy frameworks</b>	
Forest Policy	<ul style="list-style-type: none"> <li>➤ Stakeholder participation</li> <li>➤ Maintenance of Permanent Forest Estate</li> <li>➤ Sustainable forest management</li> <li>➤ Promotes private sector</li> <li>➤ Provides incentives for forest resources development</li> </ul>
<b>Guidelines and Regulations</b>	
Private Forest Registration Guidelines	<ul style="list-style-type: none"> <li>➤ Regulates management of Private Forests</li> <li>➤ Regulates management of Community Forests</li> </ul>
Collaborative Forest Management Guidelines.	<ul style="list-style-type: none"> <li>➤ Community participation in forest management</li> <li>➤ Benefit sharing between NFA and the communities</li> <li>➤ Development of community regulations</li> </ul>
<b>Development Plans</b>	
National Development Plan	<ul style="list-style-type: none"> <li>➤ Sustainable development through preservation of natural resources such as</li> </ul>

<sup>13</sup> The Republic of Uganda Vision 2035. Toward a Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years, para.126-127, p. 14.

	forests
National Forest Plan	<ul style="list-style-type: none"> <li>➤ Sustainable forest management</li> <li>➤ Maintenance of Permanent Forest Estate</li> </ul>

## b) Institutional

Forestry resources management in Uganda falls under the Ministry of Water and Environment (MWE), which, through the Department of Forestry Sector Support Service (FSSD) is responsible for formulating policies, standards and legislation for environment management. The National Forestry Authority (NFA) and the Uganda Wildlife Authority (UWA) manage central forest reserves and forest under wildlife conservation areas, respectively. Local government District Forestry Services (DFS) are mandated to manage Local Forest Reserves (LFR). The DFS is also mandated to provide advisory services for the management of private forests (Table 22).

Other key actors in forest management include the National Environment Management Authority (NEMA) which coordinates and supervises all environment issues in the country. The Ministry of Finance, Planning and Economic Development (MoFPED) is responsible for setting the pace for national development and allocating the necessary financial resources.

Donors, NGOs and the private sector contribute strongly to forest management especially by implementing those activities constrained by funding or whose management is not suitable for government service institutions. There is an estimated 200 CSOs working in the environment and natural resources sector (MWE, 2009). The challenge is the short-term cycle of their projects and duplication activities due to poor coordination. Most of these CSOs have come together in a somewhat loose alliance called the Uganda Forestry Working Group (Nsita 2010).

Table 22: Summary of institutional mandates in relation to REDD-Plus

Institution	Responsibility
Ministry responsible for Forestry (MWE)	<ul style="list-style-type: none"> <li>➤ Policy development, coordination and supervisions</li> <li>➤ Regulating the forest sector</li> <li>➤ Monitoring and reporting on sector</li> <li>➤ Mobilizing funds for the sector</li> </ul>
NFA	<ul style="list-style-type: none"> <li>➤ Focal Point for REDD-Plus and responsible for formulation of REDD-Plus Strategy for Uganda</li> <li>➤ Management of CFRs</li> <li>➤ Monitoring Forestry Resources</li> <li>➤ Capacity and technology development and transfer</li> <li>➤ Stakeholder/community participation</li> <li>➤ Regulating trade in forest produce</li> </ul>
UWA	<ul style="list-style-type: none"> <li>➤ Management of forested national parks</li> <li>➤ Monitoring forestry resources within national parks</li> <li>➤ Capacity and technology development for carbon trade and investments</li> </ul>
Local Governments	<ul style="list-style-type: none"> <li>➤ Management of local forest reserves</li> <li>➤ Regulate management of community forests, private forests</li> <li>➤ Monitoring Forestry Resources outside Protected areas</li> <li>➤ Facilitating stakeholder/community participation in management of protected forestry resources</li> <li>➤ Regulating trade in forest produce from Local Forest Reserves</li> <li>➤ Environmental planning + land use planning</li> </ul>

Private Sector	<ul style="list-style-type: none"> <li>↗ Forestry resources utilization</li> <li>↗ Forestry resources development</li> <li>↗ Trade in forestry produce</li> </ul>
Communities and or land owners	<ul style="list-style-type: none"> <li>↗ Forestry resources development</li> <li>↗ Forestry resources management</li> <li>↗ Land management and land use prioritization</li> <li>↗ Forest produce harvesting and utilization</li> </ul>

### c) Regional/International policy/legal and institutional

Uganda is a signatory to several internal agreements (Conventions and protocols) and as such is obliged to apply international law in management of her forestry resources where applicable. Indeed, Uganda qualifies to participate in the FCPF because it ratified the CBD. Therefore, in its REDD-Plus strategies, efforts to implement Uganda's obligations to these agreements will be emphasized.

#### Biodiversity values

Uganda ranks second in Africa for its mammalian diversity, has more than half of the birds and a third of the butterflies listed for the continent (Howard, 1991; Pomeroy, 1993; Davenport and Matthews, 1995), and a higher proportion of Africa's plant 'kingdoms' than any other country in the continent (White, 1983). Much of this biodiversity is concentrated in the nation's forests.

Forests of the Albertine Rift especially represent an area of great importance for conservation of biodiversity. The Albertine Rift has been identified by Birdlife International as an Endemic Bird Area, by World Wildlife Fund as an Ecoregion and by Conservation International as a biodiversity hotspot (Eastern Afromontane habitat in Africa).

Between 1993-1995 the Forest Department carried out surveys of all forest reserves larger than 50 sq km. The most biodiverse forest reserves are located in western and southwestern Uganda particularly in the Albertine Rift region (e.g. Bwindi Impenetrable NP, Kasyoha-Kitomi FR, Rwenzori Mountains NP and Budongo FR) and in the east of the country (Mt Elgon, Kadam and Moroto FRs). In the north and east, Moroto Forest reserve is ranked forth while Otzi, Kadam and Nyangea-Napore in North are ranked 10th, 11th and 20th respectively (Nampindo, Picton-Phillips, Plumpre, 2005). This distribution shows the importance of the Albertine Rift forests, however, it also shows that other parts of the country are also home to forests with high biodiversity importance.

Most of the forest loss in Uganda in recent decades occurred outside protected areas. While only 15% of forest reserve is degraded, 50% of all the tropical forest on private land is degraded (NEMA, 2008). For example, a total of 84 centrally managed forests occur in the Albertine Rift in Uganda<sup>14</sup>. However, many of the forest reserves are small in size with only nine of them exceed 50 sq km in size. Hence, the issue of forest corridor conservation/restoration is critical for biodiversity conservation in Uganda.

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<sup>14</sup> Five of these are national parks and 79 are central forest reserves. In addition there are 21 local forest reserves managed by the districts.



Other parts of the country also have forest resources which contain habitats of prime biodiversity importance. For example, the protected areas in northern Uganda have both a national and global importance for biodiversity conservation with many of the parks and reserves conserve species that are not found elsewhere in Uganda. Many reserves are on mountaintops and conserve species that are part of the Eastern Afromontane Biodiversity Hotspot (Brooks et al. 2004) and therefore of global significance.

While the region is not as rich in rare and endemic species as the Albertine Rift ecoregion in western Uganda it does contain a good number of species of conservation concern. Many of the Forest Reserves contain plants and animal species also harbour several species endemic to afromontane habitat or the Somali-Masai biome. Many of the isolated mountains in northern Uganda and southern Sudan contain forest with endemic species to the Eastern Afromontane hotspot (Brooks et al. 2004).

In addition, several of these areas are connected and form larger landscapes highlighting again the need to preserve landscape connectivity (Kidepo-Agoro Agu Landscape, Murchison-E.Madi-Nimule landscape). These landscape could be connected again to conserve the old corridor that allowed elephants to migrate between Murchison Falls and East Madi.

Biodiversity aspect has long been recognized by several carbon standards, most notably through the Climate, Community and Biodiversity Alliance (CCBA) standard. It is possible that wildlife-rich habitats can command a premium under REDD+ or voluntary carbon market and currently there are efforts to formalize this “wildlife-premium” framework into REDD+ design as recently announced by the World Bank. The World Bank’s Wildlife Premium Market Initiative will focus on flagship species such as tigers, lemurs, elephants, great apes and other species which require large forest areas for their survival. Uganda’s forests are home to several flagship endangered species of high biodiversity importance such as Common Chimpanzee (*Pan troglodytes*), African Forest Elephant (*Loxodonta cyclotis*), African Golden Cat (*Profelis aurata*), and others which provide significant wildlife premium to the value of Uganda’s forests.

It is also important to design REDD+ strategies which would conserve (and restore) these prime conservation forests through better management interventions such as law enforcement, zoning and land use planning to assure landscape connectivity, new management approaches (e.g. community involvement, public-private partnerships through concessions), enrichment planting, removal of invasive species and others

#### **2.7.5.2 Forestry research and training**

Formal training in forestry occurs in Makerere University (graduate level) and Nyabyeya Forestry College (Diploma level). This is supplemented by informal training by Saw Log Plantation Grant Scheme (SPGS) and staff mentoring.

Forestry research has been generally weak and poorly coordinated. National Forestry Resources Research Institute (NAFORRI) has been poorly funded, inadequately staffed and is weakly linked to universities and training institutions. NAFORRI could play a key role in analyzing the scientific and socio-economic aspects of REDD-Plus in order to advise on the potential for REDD-Plus in Uganda.

Perhaps, the worst challenge in forest management is the inadequate management of information at the central and district levels. Most of the historical trends relevant to the new structures are difficult to trace.

### 2.7.5.3 Trans-boundary forest management

Forest governance reforms have also sought to address trans-boundary forest management although this has been done at project level. For example, the four-year UNDP/GEF East African Biodiversity Project, which focused on Sango Bay swamp forests extending to Tanzania and Mt. Kadam forest extending Kenya. Others include catchment forest management as part of the Lake Mt Elgon Regional Ecosystem Conservation Programme (MERECP), Victoria Management Programme (LVMP), and the International Gorilla Conservation Programme (IGCP) with DR Congo. Currently, in the East African Community Climate Change Policy 2010 the member states propose a number of regional initiatives.

### 2.7.5.4 Forest governance in Uganda

#### a) Management/institutional Reforms

Forest governance deals with how power is exercised, how people are involved in forestry issues, especially those of public concern (World Resources Institute, 2009). Strategies for sustainable forest management have been evolving over time (Table 23). Before 1967, most of the forest reserves were managed through decentralised mechanisms. In 1967, the government adopted a republican constitution, which centralized virtually all government decision-making powers, bringing the management of all forest reserves under the Forest Department (a central government arm) (Nsita 2002).

In 1993, the government decentralised (devolved) management of central forest reserves to Local Governments as a way of increasing people's participation in decision-making. However, this was without adequate prior capacity building and resulted in heavy forest losses as decisions mainly for forest conversion were made based on local politics and not technical guidance. The worst affected areas were South Busoga and Luwunga forest reserves (Nsita 2002). In 1995, Central Forest Reserves were recentralized through subsidiary legislation.

Table 23: Chronology of Institutional reforms in Forestry management

Era	Institutional reforms
1898	Establishment of Forest Service
1902	Forest Department
1928-1940	Establishment of Forest Reserves
1967	Creation of CFRs
1993	Decentralized Forestry Management
	Change in management of CFRs to NPs
1997	Recentralization
2004	National Forest Authority

#### b) Legal and policy reforms

Since 1997, forest sector reforms have developed frameworks for increasing active citizenship participation (especially of the poor and vulnerable) in decision-making in the management of key resources in the country with the aim of enhancing integrity, transparency and accountability (Table 24). The 2001 National Forestry Policy, the 2002 National Forest Plan and the 2003 National Forest and Tree Planting Act promote public participation and partnership between governments, communities and private companies in forest management. The NFTP Act also requires the Minister to consult before

taking major decisions on forest reserves. The National Environment Management Policy emphasises the participation of the private sector and communities in natural resource management and recommends use of incentives including sharing of benefits from conservation.

The ongoing review of the 2002 National Forest Plan shows average performance (rated at about 50%) of the sector mainly due to inadequate forest law enforcement and institutional inadequacies (Nsita 2010).

Table 24: Chronology of Policy and Institutional reforms related to Forestry resources management

Era	Institutional reforms	Policy reforms
1898		Establishment of Forest Service
1901		Forest Policy
1902	Forest Department	
1928-1940		Establishment of Forest Reserves
1964		Forest Act
1967		Creation of CFRs Forest Policy
1991		Change in management of CFRs to NPs (Bwindi, Mgahinga and Rwenzori)
1993		<ul style="list-style-type: none"> <li>➤ Decentralized Forestry Management</li> <li>➤ Change in management of CFRs to NPs (Semlki, Kibale and Mt Elgon)</li> <li>➤ Decentralization Policy</li> </ul>
1995		Constitution of Uganda <ul style="list-style-type: none"> <li>➤ Environment Act</li> <li>➤ Wildlife Policy</li> <li>➤ Environment Policy</li> </ul>
1996		Wildlife Act
1997		<ul style="list-style-type: none"> <li>➤ Recentralization</li> <li>➤ Land Act</li> <li>➤ Collaborative Forestry Guidelines</li> </ul>
2002		Forestry Policy
2004	National Forest Authority	Forest and Tree Planting Act

### c) Evolution of management approaches

#### i) Co-management and user groups (Collaborative Forest Resources Management)

Policy provisions for community participation in forest management have been implemented (mostly facilitated by civil society organisations) to a very limited scale although where this has happened, there has been significant improvement in forest status. CFM was piloted in 1998 in Mabira and Namatale CFRs, but so far, only 30 agreements, covering only about 22,000 ha (about 3% of the total area occupied by natural forests and woodlands) (NFA Annual Report 2006/7).

#### ii) Community Resources Management

Concerning forest areas under UWA, Community Resource Management was introduced in 1996 in Mt Elgon, Kibale, Bwindi and Mt Rwenzori Forests in response to the pressures of livelihood dependence on these forests. Formal arrangements for this collaboration are concluded in form of MoUs developed

with adjacent communities. Community Resource Management in wildlife protected areas is governed by the 2003 Uganda Wildlife Policy (1999) and Act.

### **iii) Licensing of forest reserves for establishment of Plantation forests**

The Forestry management agencies initiated arrangements for licensing communities and private individuals to plant and own trees in forest reserves in mid 1990s' under the Peri-Urban Plantation Scheme. This initiative was extended to other forest lands in early 2000. The latter has been boosted by the Saw log Production Grant Scheme (SPGS) since 2004.

Although licensing private tree growers to establish forest plantations on central forest reserves has created some success in increasing forest cover especially under the Saw log Production Grant Scheme (SPGS). Currently, a Presidential directive has put a ban on this provision and reduced license cycles from 50 to 25 years. Nonetheless private sector involvement in forestry has been quite successful and the growing interest in forest/timber certification is generating experiences that will guide carbon markets.

The provision by NFA to license (for 25 years) 10% of the plantable area within forest reserves to CFM communities has been tried only to a limited extent, but has significant potential since communities own the trees and therefore (presumably) the carbon rights.

In conclusion, there are mixed successes and failures in legal, policy and institutional frameworks. The key area of interest is that they all provide for stakeholder participation and sustainable forest management. The ban on logging in natural forests has contributed to success in safeguarding some of the forests. The change in protection status of major mountain/catchment forests of Mgahinga, Bwindi, Mt Rwenzori, Semliki, Kibale and Mt Elgon from Forest Reserve Status to national park Status greatly enhanced their legal protection.

Institutional performance in terms of efficiency and effectiveness has had teething problems. Funding and institutional capacity notwithstanding, the centralized and decentralized functions continue to pose a challenge in as far as enforcement, regulation and forest resources development are conserved.

Incentives such as CFM, CRM and Licensing for plantation establishment have succeeded at localities where they are in practice. These initiatives provide good avenues for REDD+ implementation in as far as stakeholders participation is concerned and therefore should be scaled up.

#### **1.1.6 2.7.6 Stakeholder mapping**

There is a wide spectrum of stakeholders engaged in forestry resources management and utilization in Uganda. The encompass actors at policy and regulations level to forest resource

users and dependants. Table 25 presents the checklist of actors in accordance with the drivers of deforestation and forest degradation.

Table 25: Summary of key deforestation and forest degradation drivers and actors

Driver	Actors	Observation
Charcoal	Private Sector/traders Regulating authorised Community Land Owners Consumers	<ul style="list-style-type: none"> <li>↗ Mostly responding to internal and out of country markets in Sudan, Rwanda and Kenya</li> <li>↗ Difficult to regulate because of tenure of land and tree resources</li> <li>↗ Poor charcoal production technologies that are wasteful</li> <li>↗ Market prices influenced by unaffordable or lack of alternatives to charcoal energy</li> </ul>
Firewood	Private Sector/traders Community Land Owners Consumers	<ul style="list-style-type: none"> <li>↗ Mostly responding to large scale consumers – schools, hospitals, military and prisons installations, urban centres, building industry/brick making, tobacco curing</li> <li>↗ Difficult to regulate because of tenure of land and tree resources</li> <li>↗ Poor utilization technologies that are wasteful</li> <li>↗ Market prices influenced by unaffordable or lack of alternatives to charcoal energy</li> </ul>
Timber	Private Sector/traders Regulating authorised Land Owners Consumers	<ul style="list-style-type: none"> <li>↗ Mostly responding to internal and out of country markets in Sudan, Rwanda and Kenya</li> <li>↗ Difficult to regulate because of tenure of land and tree resources</li> <li>↗ Weak enforcement in forest reserved land</li> <li>↗ Poor timber production technologies that are wasteful</li> <li>↗ Market prices influenced by booming construction industry and general scarcity, especially of hard wood.</li> </ul>
Agriculture	Land Owners Community Private Sector	<ul style="list-style-type: none"> <li>↗ Largely subsistence and practicing bush clearing for expansion of agricultural land</li> <li>↗ Agricultural encroachment into protected areas</li> <li>↗ Competition between trees and other crops for available land</li> </ul>
Livestock	Land Owners Pastoralist Groups	<ul style="list-style-type: none"> <li>↗ Clearing of woodlands and grassland forests for pasture improvement</li> </ul>

This rich diversity of actors and stakeholders provides an opportunity for REDD-Plus implementation. At the same time, it creates responsibility of ensuring that all actors and stakeholders are well coordinated in order for REDD-Plus to succeed. The latter will require development and application of incentives and measures for stakeholder participation and benefit sharing and participation in monitoring REDD-Plus.

#### *1.1.7 2.7.7 Implications of deforestation and forest degradation on forest dependent people*

The major grouping of forest dependent people considered under this category is the Batwa/Pygmies and Benet.

The following are the major concerns or REDD -Plus.

- a) Declining forest resources (quantity and diversity)
- b) Access and use of forest resources.
- c) Ownership of Carbon Stocks and participation in Carbon Trade.
- d) Land tenure requirements for participation in Tree planting.
- e) REDD –Plus implementation arrangements that deliver benefits directly to the forest dependent people.

#### *1.1.8 2.7.8 Measures for safeguarding livelihoods of forest dependent people*

Measures for safeguarding the livelihoods of these people are briefly introduced under section 2D. This R-PP does not exhaust the identification of the likely impacts, neither does it prescribe in detail, the measures envisaged under this section. Instead, Section 3.6 introduces the Environmental and Social Management Framework as a tool that will investigate such issues and describe measures for addressing them. The Environmental and Social Management Framework shall also address the World Bank Safeguards.

The above notwithstanding, it is highly probable the measures to be developed under the Environmental and Social Management Framework will include the following, among others.

- Legal provisions in the Constitution, Land Act, Local Government Acts, etc.
- Conservation/Protected Areas policies and laws that recognize existence of Forest dependent people within protected areas.
- Conservation measures and approaches such as CFM, CRM, which permit regulated access and use of forest resources within protected areas.

As indicated in section 1.5.3, forest dependent people (e.g., Batwa in Kabale, Kisoro and Kanungu districts) are positively responding to new ways of life including engaging in income generating activities and sedentary life. These success stories offer the opportunity to continue to facilitate “willing” forest dependent people in such activities that ultimately uplift the quality of their livelihood. It is expected that ESMF will include such intentions.