Exploring demand-side measures for the reduction of deforestation in Kenya and Tanzania
## Contents

1 Introduction .......................................................................................................................... 2  
  1.1 Background .................................................................................................................. 2  
  1.2 Deforestation in Kenya and Tanzania ........................................................................... 2  
  1.3 Introduction to workshop .............................................................................................. 3  
  1.4 Workshop programme ................................................................................................... 4  

2 Workshop Proceedings ......................................................................................................... 5  
  2.1 Introduction .................................................................................................................... 5  
  2.2 Setting the context ........................................................................................................ 5  
    2.2.1 Introduction to the workshop .................................................................................. 5  
    2.2.2 Demand side measures in Tanzania ....................................................................... 6  
    2.2.3 Demand side measures in Kenya ............................................................................ 7  
    2.2.4 Plenary questions and answers .............................................................................. 7  
  2.3 Exploring demand-side measures .................................................................................. 9  
    2.3.1 Timber ..................................................................................................................... 9  
    2.3.2 Charcoal ................................................................................................................. 11  
    2.3.3 Tobacco .................................................................................................................. 14  
    2.3.4 Maize ..................................................................................................................... 16  
    2.3.5 Livestock ................................................................................................................. 18  

3 Next steps ............................................................................................................................ 21  
  3.1 Media briefing ................................................................................................................ 21  
  3.2 Dissemination of workshop reports .............................................................................. 21  
  3.3 Mainstreaming workshop recommendations ............................................................... 21  

Annexes .................................................................................................................................. 22  
  Annex 1: List of participants ............................................................................................... 22  
  Annex 2: Keynote speech ..................................................................................................... 23  
  Annex 3: Background on demand side measures (Simon Milledge) ................................ 26  
  Annex 4: Potential for demand side measures in Tanzania (Robert Otsyina) ................ 28  
  Annex 5: Potential for demand side measures in Kenya (David Maingi) ......................... 33
1 Introduction

1.1 Background

Healthy and productive forests are a foundation for sustainable development, with their goods and services supporting economies and livelihoods of forest-dependent people. Indeed, the long-term sustainability of forestry, agriculture and other land-based enterprises depends upon maintaining sufficient forest cover and quality. Productive forests provide numerous goods essential for urban energy (wood biomass), construction (timber and poles), food (for humans and livestock) and healthcare (traditional medicines). Forests also provide valuable ecosystem services, helping to stabilise environmental systems including water and carbon cycles, increase resilience to natural disasters and the effects of climate change, and provide a home to biodiversity and nature-based benefits. The loss of forest cover through deforestation and the degradation of forests and woodlands therefore present a range of economic, social and environmental threats to sustainable development and climate change.

In driving the conversion of forests to other land uses, the demand for wood, food and energy affects the food security and livelihoods of forest-dependent people as forest ecosystem services are impacted, including soil erosion and degradation of water resources. Furthermore, climate change resulting from deforestation and forest degradation affects underlying climate risks such as drought, intense rainfall and floods, and also triggers secondary stresses such as the inability to sustain trade in forest and agricultural commodities, the spread of diseases and pests, increased competition for resources, human and species migration and biodiversity losses.

Increasing demand for and trade in some agricultural, timber and energy commodities places considerable pressure on forests and frequently acts against national ‘supply-side’ efforts (e.g. sustainable forest management) to curb deforestation and promote sustainable land-based enterprises. The importance of trade in these commodities to national economies and rural development suggest a need to address the ‘demand’ or consumer end while also addressing supply side interventions to reduce deforestation driven by the expansion of commodity production. Interventions targeting demand could include regulations, public procurement policies, and industry-led standards and guidelines, certification schemes and campaigns. Too often these measures are delivered in isolation, and there is a need for more coordinated approaches that adopt a holistic view of the problem and enable the creation of partnerships between stakeholders operating in forest-risk commodity supply chains (Walker et al., 2013).

1.2 Deforestation in Kenya and Tanzania

Forests in Tanzania and Kenya are experiencing high levels of deforestation and forest degradation due to the unsustainable extraction of forest products including timber and charcoal, and the conversion of forests for agriculture. The level of timber and charcoal demand in urban areas such as Dar es Salaam, Nairobi and Mombasa currently outstrips the sustainable supply. For example, Kenya has a wood supply potential of 31.4 million m³ as compared with a national demand of 41.7 million m³, which is expected to grow at a rate of 3 per cent per year (FAO, 2013¹). In Dar es Salaam, the number of households using charcoal for cooking increased from 47 per cent in 2001 to 71 per cent in 2007 (World Bank, 2010²). Urban demand for food commodities demonstrates a similar rise as populations and disposable incomes increase. Meanwhile, the production of forest and farm products are relatively easy and accessible options to raise much needed household incomes. Pressures to convert forests for agriculture are exacerbated by poor agricultural practices such as shifting cultivation and failing to carry out crop rotation, conservation methods, best use of agricultural technology and land husbandry techniques.

According to the Food and Agriculture Organization of the United Nations (2013), Kenya deforestation accounts for approximately 54,000 hectares of forest a year. Forest cover has reduced to 7 per cent compared to 11 per cent in 1963, when Kenya became independent, despite government attempts to curb the problem through tree planting and conservation programmes. Similarly, Tanzania’s national demand for food and wood is increasing faster than supply, resulting in a loss of 400,000 ha of forest per year and over 60 per cent of the country affected by deforestation and degradation.

Changes in temperature and rainfall patterns resulting from unsustainable agriculture also have profound impacts on climate-sensitive socio-economic sectors in Kenya and Tanzania, including the agriculture, forestry and energy sectors, which are seen to be the backbone of the country’s economy.

Previous efforts to tackle the challenges posed by forest-risk commodities have generally focused on measures aimed at increasing supply, such as planting more trees, and improving technologies to produce more wood, agricultural and environmental goods and services. For example, in Kenya, government support has enabled the formation of community forest associations for collaborative forest management. Government funding has encouraged the formation of youth groups, who engage in seedling production, tree planting, tree harvesting activities and conversion to wood products such as sawn timber, using affordable technologies including mobile saws. In Tanzania, capacity building of village environment committees has enabled the planting of more trees and an increase in harvesting and conversion.

While these interventions have met with some success in terms of increasing supply, the high and increasing rate of demand has frustrated efforts, with the state of forests continuing to worsen. It is clear that there is a need to explore the possibility of demand side measures complementing supply measures in both countries.

During 2013, the International Institute for Environment and Development (IIED) and Development Associates Limited (DASS) undertook a scoping study in Kenya and Tanzania to identify potential demand side measures that can effectively be implemented to curb deforestation and degradation resulting from agricultural, energy and forest commodities, whilst improving livelihoods and sustaining trade in forest and agricultural commodities. The study focussed on five commodities that cause deforestation and hold potential for developing demand-side measures: maize, livestock, tobacco, timber and charcoal.

1.3 Introduction to workshop

A workshop was held on 27 February 2014 at the Peacock Hotel in Dar es Salaam, Tanzania, where the results of this scoping study were shared with relevant stakeholders from both countries. The objectives of the workshop were to increase participants’ understanding of existing and potential demand side measures for the reduction of deforestation caused by agricultural and forest commodities, and to identify opportunities for further action that would enhance these demand side measures in a way that contributes towards security of supply, markets and tenure.

It was facilitated jointly by a team from the International Institute for Environment and Development (IIED), UK, Development Associates Limited, Tanzania and Wanley Consulting Services, Kenya. The workshop included presentations, guided group work and participatory plenary discussions.

A total of 33 participants attended the workshop: seven from Kenya, 24 from Tanzania and two from the UK, representing all five value chains discussed. A full list of participants showing the country and sector represented is shown in Annex 1 of this report.
1.4 Workshop programme

09:00  Welcome

09:10  Keynote address
       Edgar Masunga, Acting Chief Executive, Tanzania Forest Service

Session 1: Setting Context

09:30  Introduction to the workshop – purpose, definitions, international context
       Simon Milledge, International Institute for Environment and Development

10:00  Country findings
       Demand-side measures in Tanzania: Robert Otsyina, Development Associates Ltd.
       Demand-side measures in Kenya: David Maingi, Wanley Consulting Services Nairobi

Session 2: Exploring demand-side measures

11:00  Facilitated group discussion: identifying opportunities to develop demand-side measures

14:00  Facilitated group discussion: risk assessment and prioritising action

16:30  Conclusions – analysis of group work and future planning
2 Workshop Proceedings

2.1 Introduction

Simon Milledge called the meeting to order by welcoming participants, after which introductions were made. Participants agreed that three presentations would be made first, to be followed by discussion and plenary sessions.

Mr. Edward Masunga, Acting Chief Executive, Tanzania Forest Service (TFS), delivered the keynote address, which outlined the status of deforestation in Tanzania. He cited the negative impacts of deforestation through the resulting climate change, which impacts on livelihoods, environmental systems and trade. The presentation noted that supply side measures alone cannot effectively solve the problem, and studies on demand side measures and discussions from the workshop would endeavour to recommend better approaches. Mr. Masunga was optimistic that the workshop results would be feasible for adoption by all stakeholders. The full address is included as Annex 2.

2.2 Setting the context

2.2.1 Introduction to the workshop

Simon Milledge, International Institute for Environment and Development

The purpose of the meeting was clearly explained, aiming to increase participants’ understanding of existing and potential demand side measures for the reduction of deforestation caused by agricultural and forest commodities, and to identify opportunities for further action. Some background was provided in terms of how the demand side measures process had been identified, including an explanation of studies that had led to this workshop, and which had brought together participants with wide experience from Kenya and Tanzania. The presentation explained the nature of demand side measures and how they operate at international levels and in national contexts (see Figure 1).

Figure 1: Nature of commodity trade and demand-side measures

Supply-side measures
- Land tenure, local control
- Land use planning
- Sustainable agriculture
- Legislation, taxation
- Private forestry
- Community NR mgmt
- Watershed management

Demand-side (trade/market) measures
- Import legislation
- Public institutions
- Bilateral initiatives
- Private sector
- Civil society
- Consumers
- Multi-stakeholder initiatives

All necessary Complementarity key for sustainability
The connection was made between businesses within key commodity chains and deforestation and degradation, with examples provided from respective commodity value chains. The complexity of value chains was demonstrated, and a call was made for interventions targeted within and outside commodity flow chains. Types of measures adopted at global, national and community levels were discussed under relevant contexts, and participants were asked to identify more from their areas of specialisation. The presentation highlighted how demand-side measures can ultimately help ensure the long-term security of supply, markets and tenure, with some of their main incentives including as follows:

- Improves trade chain partnerships and stakeholder relationships;
- Improves competitiveness (enhanced supply chain efficiencies, better quality and high premium products, positive public image);
- Complements and reinforces efforts on the supply side;
- Limits the take up of forest-risk and/or illegal commodities’
- Stimulates or creates niche markets;
- Creates a more level playing field;
- Favours products with higher environmental and social standards; and
- Opportunities for government and industry to work together.

Some important considerations from international experience were shared, including the need to consider a strategic and coordinated ‘mix’ of demand-side measures that ensure support to sustainable commodity suppliers. Consideration would be needed given the differences between the East African context and the global context, including the different commodities in question, the unclear distinction between supply and demand with the majority of most commodities traded domestically, a large informal sector and many smaller-scale producers.

The presentation is included as Annex 3.

### 2.2.2 Demand side measures in Tanzania

*Robert Otsyina, Development Associates Ltd.*

The presentation from Tanzania covered the status of forests, the scale of deforestation (around 400,000 hectares lost annually) and direct drivers of deforestation, namely agricultural expansion, firewood and charcoal production, timber extraction, overgrazing, uncontrolled fires and bio-fuel production. Existing demand side measures in Tanzania and challenges deterring their implementation were also presented with respect to selected deforestation-risk commodities (timber, charcoal, tobacco, maize and cattle). A common challenge is that some players in the supply chains simply do not realise the link between their operations and deforestation because they are too far removed from the supply side. Another generic challenge is the lack of enforcement of existing rules and regulations. Opportunities to tackle identified challenges were also discussed which could provide effective interventions. The presentation ended with conclusions and recommendations to provide effective action to lower deforestation and reverse collapsing trading and biological systems, including:

- Promoting clarity and understanding of jurisdiction and responsibilities of national, regional and local authorities over the allocation and control of forest resources to minimise corruption;
- Initiating a participatory process to develop and implement suitable demand side measures;
- Ensuring transparency and accountability among stakeholders;
- Increasing awareness on demand side interventions among chain actors and stakeholders;
- Strengthening commodity organisations to implement demand side measures; and
- Supporting and promoting awareness and advocacy campaigns by civil society organisations.

The presentation is included as Annex 4.
2.2.3 Demand side measures in Kenya

David Maingi, Wanley Consulting Services Nairobi

The presentation from Kenya began with an overview of the forest sector and current patterns of deforestation (around 54,000 hectares annually), partly driven by supply-demand deficit of 10 million m$^3$ of wood which is sourced through non-sustainable methods. The presentation covered the key causes of deforestation which the study found to be: increasing demand for agricultural products exceeding supply; unsustainable marketing and utilisation practices (illegal sourcing, wasteful utilisation); poor resource awareness and low capacity among forest, land and tree owners; poverty, overreliance on natural resources and undervaluation of resources; and ineffective policies.

The presenter explained the principal demand measures already in place, as well as potential new ones, with respect to the five commodities (timber, charcoal, tobacco, maize and cattle), and stressed the importance of packaging the demand side measures in a form that stakeholders can understand and adopt. Capacity building and information dissemination were identified as among the important interventions to encourage traders to adopt demand side measures. Recommendations included the following:

- Capacity building and awareness creation targeting specific stakeholders;
- Streamlining of demand side measures into existing legislations and policies during the ongoing review of the Kenya Constitution;
- Step-up effective implementation and enforcement of existing measures ensuring sustainable practices through improved governance for accelerated adoption;
- Formation of associations among stakeholders to hasten action;
- Participatory processes in reviewing existing measures; and
- Identify and promote incentives that catalyse adoption of acceptable demand side measures.

A copy of the presentation is included as Annex 5.

2.2.4 Plenary questions and answers

Q1 Why did the study not select paper as a deforestation-risk commodity when it is widely utilised and demand is growing?

The timber value chain includes paper-making as one of the primary products. In Kenya the only paper mill Pan paper is closed but it is being revived.

Q2 Why is maize considered a deforestation-risk commodity while, for example, beans - which are grown in large plantations in the Arusha region of Tanzania – is not?

Maize can be considered as an important deforestation risk commodity due to its high widespread demand and the high preference of farmers to cultivate maize when making decisions regarding land use. It is one of the most widely grown cereals in Tanzania and Kenya, as compared to beans, which are grown in relatively smaller areas. For example, in Tanzania maize is grown by over 60 per cent of farmers, and covers over 3 million hectares, with production increasing by 18.7 per cent per annum. In the last ten years, a growing supply and demand deficit has been observed in Kenya and is expected to increase. For optimal yields, maize requires high nutrient soil, which tends to be found in virgin forest lands, the availability of which is diminishing, causing a turn to shifting cultivation systems and resulting in deforestation. Maize has also become an important commercial commodity traded across borders in the region, as well as to export markets, both involving several market actors, regulators and service providers. Due to its relatively high demand at household level and with limited and constrained inputs, farmers attempt to grow maize in areas not suitable for it, causing massive destruction of existing vegetation for no or very minimal yield. When farmers are subjected to making decisions regarding what to grow, they usually choose maize as a food crop, particularly in most subsistence contexts.
Q3 Is it appropriate to consider cattle as a deforestation-risk commodity, given that cattle do not fell trees while browsing in the forest?

Cattle do not fell trees directly but forests can be cleared to provide pastures and fodder crops. The introduction of large herds causes soil erosion and degrades forests water sources through trampling and overgrazing. Sustainable cattle and range management is desirable, but due to increasing numbers of animals in non-range areas and poor management of grazing resources, land degradation ensues, which also limits forest regeneration. As indicated in the survey report, cattle is considered a risk commodity because it is in great demand and traded internally as well as to cross-border markets.

Q4 What type of demand side measures suit our East African context in which most commodities are consumed locally in urban areas and the growing cities?

Demand side measures that suit East Africa are incentive-based, for example the reduction of wasteful processes through the adoption of better technologies and optimising returns for all within the chain, such as through fair trade. Implementing chain of custody certification allows entry into environmentally conscious markets and regulations that protect consumers. The list is large but the impact of each measure depends on the commodity. The scoping study noted that legislation and public sector measures in terms of policies and regulations exist in Kenya and Tanzania, but are not adequately implemented. Private sector measures and structures such as commodity associations and roundtables have also been initiated but are still weak in implementation due to financial and management challenges as well as a lack of knowledge on incentives. Some of these measures could provide a starting point for further development.

Q5 While undertaking the study, did you come across a case where legislation and regulations conflict with each other and between sectors?

Legislation and regulations are set to create an enabling environment for the intended action or production to be sustainable. In most cases, land-based commodities compete for land and any measure promoting the optimisation of one without considering side effects can result in conflicts. One example of conflicting legislations is when forest legislation does not emphasise charcoal production sufficiently, despite the fact that the commodity consumes more wood than recognised wood products such as posts for electricity transmission lines. As another example, the Agricultural Act in Kenya recognises neem (Azadirachta indica) as a weed not a tree, despite it being a tree suitable for wood carving and promoted in the coastal regions due to a shortage of carving wood.

Q6 Most of the demand side measures are voluntary processes. Are any of the demand side measures created by local initiatives?

Demand side measures such as legislation and public and private sector measures are borne mostly from local initiatives. Private sector measures such as eco-labelling and certification, which target international consumers, are usually based on external standards, even though local certification standards exist for local markets. Although some measures such as certification are seen as voluntary, some markets prefer certified commodities, so certification becomes almost obligatory as companies have little choice but to use them.

Q7 How important is it that urban-based traders are engaged in these initiatives to make them aware of environmental issues?

Dealers and traders need to be fully engaged in promoting demand side initiatives as they are key players providing an entry point into the relevant value chains. This forum represents a first step in engaging such stakeholders in the process, as it is anticipated that most participants will inform their colleagues about the outcomes of this meeting. Outputs from this workshop will be disseminated to reach dealers and traders. The media have been briefed on the proceedings and newspaper features will provide more information.

Q8 Sawdust/waste is a big challenge in timber industry. Is there any way to utilise the sawdust to make either timber or any other useful products?

Improved technologies can use sawdust to produce charcoal and other wood-based products. An important intervention is the reduction of sawdust or wood waste from the current level 26 per cent recovery rate in Kenya, to 40 per cent. In rural areas, sawdust is used as fuel wood by some specially designed cook stoves.
2.3 Exploring demand-side measures

Participants were divided into five groups according to their commodity expertise: maize, livestock, tobacco, timber and charcoal. Each group was provided with two diagrams depicting the value chains for the respective commodity in the two countries (Kenya and Tanzania). Groups worked to formulate a generic trade chain for each commodity. This required consolidation of the two country examples and supplementing with missing information (e.g. types of actor, uses of the commodity).

The groups were also required to discuss and identify potential strategic points of influence in the trade chain with respect to introducing or strengthening demand-side measures. For example, in some trade chains there are stages where relatively few companies dominate and can therefore exert considerable influence. As another example, there may be stages in a trade chain that account for large proportions of the commodity traded (by volume), hence acting at these stages can have considerable impact. Each group prioritised the three key stakeholders that could exert considerable influence within each of the commodity value chains, and then described the kinds of demand-side measures that could be improved upon, or developed. Guidelines were provided to guide group deliberations.

The following sections summarise the generic trade chains for each commodity and proposed strategic points of influence.

2.3.1 Timber

Prioritised stakeholders for demand side interventions

The three prioritised stakeholders identified in the timber trade chain were millers, transporters and the government (Figure 1), with their potential in terms of demand side measure implementation presented below.

Saw millers

Saw millers are one of the primary processors of round wood in terms of absolute volume of harvested trees. They convert round wood into sawn timber of sizes required by the markets and for ease of transportation (both to local markets and for export). In both countries, sawmills vary greatly in terms of processing capacities and technologies used. Sawmills are distributed based on their sources of raw material and markets, and are often organised into associations which can facilitate their ability to adapt and reform. Most of the saw millers are micro-millers, employing about four to five people. Although they use good quality sawn logs, they tend to produce low quality sawn wood at fairly low recovery rates (less than 26 per cent), resulting in a great deal of sawdust and wastage. Most of the small-scale sawmills do not have the technical staff as required by forest regulations. It is believed that demand side measures targeting this group of stakeholders would be effective. Large sawmills are fewer, with slightly higher recovery rates (although still below 30 per cent and low by international standards). Sawmills sell their products to merchants and secondary processors, and most have indicated the need to upgrade their technologies in order to lower wastage and raise returns. An important incentive would be lower import duty for machinery imports.

Transporters

Transporters are service providers involved in moving the timber between traders and markets. They include bicycle owners, lorries, tractors, trailers, buses and railways. Transporters were identified as key to implementation of demand side measures due to their pivotal role in the value chain, their numbers, and their capacity for organisation, which could facilitate implementation. It is through these stakeholders that most corrupt deals take place, showing the need for improved private sector standards and government regulation.
**Government**

Government institutions including national governments (Kenya) and district councils (Tanzania), which largely play a regulatory role, are important stakeholders in relation to the implementation of demand side interventions. Policies and regulations are developed by the government and its appointed organs, while government institutions are also responsible for the enforcement and regulation of the timber commodity trade. For example, the National Bureau of Statistics (NBS), customs departments, procurement agencies, district councils, Tanzania Forest Service (TFS) and Kenya Forest Service (KFS). In addition, government institutions can play a catalytic role in transforming the industry by implementing procurement policies that require sustainable sourcing.

![Timber trade chain diagram](image)

**Figure 1: Timber trade chain**

- **Source**
  - Furniture imports (e.g. China)
  - Log imports (e.g. Sudan, Tanzania, DRC, Uganda)
  - Local sources (domestic forests)

- **Processing**
  - Round wood traders and transporters
    - Sawmills
    - Wood treatment
    - Carvers
    - Pulp mills

- **Product traders**
  - Carpenter
    - Furniture
    - Construction
    - Poles
    - Carvings
    - Paper

- **Local**
  - Domestic consumers and businesses
  - Limited exports
  - Government
    - Tourists and specialist traders

Key: bolded text show stages in the trade chain prioritised for demand-side measures.
2.3.2 Existing and potential demand side measures

Table 1 presents stakeholder views on existing and potential demand side measures for timber that could be implemented by each of the three prioritised stakeholders.

<table>
<thead>
<tr>
<th>Strategic point in trade chain for intervention</th>
<th>Description of demand-side measures</th>
<th>Public sector (formal and informal sector)</th>
<th>Private sector, Associations and roundtables, Civil society</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Saw millers</td>
<td>- Legislation covering recovery, efficiency, new technology, regulating raw material access and strengthening participatory forest management</td>
<td>- Reassessment of royalty rates - Promotion of alternatives to wood products - Tax exemptions on the technology and tools proposed</td>
<td></td>
</tr>
<tr>
<td>2. Transporters</td>
<td>- Legislation to ensure full chain of custody - Harmonisation of regulators dealing with timber movement within the East African Community</td>
<td>- Confiscation of vehicles transporting illegal timber</td>
<td>- Campaigns and sensitisation</td>
</tr>
<tr>
<td>3. Government</td>
<td>- Procurement policies that adhere to sustainably sourced timber - Creation of a forest fund</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.3.2 Charcoal

Prioritised stakeholders for demand side interventions

Charcoal makers, institutions that use charcoal stoves, and households were identified as three key actors along the chain that can exert considerable influence on the implementation of demand side measures (Figure 2), with their potential in terms of demand side measure implementation presented below.
Charcoal producers

Charcoal producers are important stakeholders in the value chain from a deforestation perspective because they are directly responsible for cutting down trees. They are numerous and their most destructive aspect is that their operations take place at stump sites where controlled cutting cannot be effectively conducted. In Tanzania, it is estimated that as many as 160,000 charcoal kilns are operated each year, equivalent to 438 kilns every day. The charcoal makers currently use inefficient kilns with very low conversion rates as well as unsustainable tree harvesting methods. This results in massive wastage and deforestation. An average annual loss of forest area of about 100,000–125,000 hectares can be accredited to the charcoal sector. Charcoal producers are mainly artisans or villagers, and often contracted by wholesalers or transporters to produce charcoal. More often they are paid in advance in terms of food or cash. In Kenya, charcoal is produced from community forests in the relatively drier parts of the country and usually lack management guidelines or sustainable harvest plans. In pursuit of higher incomes, producers tend to cut down more trees over time. These producers use earth kilns that have low recovery rates of about 10 per cent. They sell their products to merchants who transport the products to urban centres.

Charcoal producers are not organised into groups in either country, giving producers a disadvantage when bargaining for fair returns in the value chains. If organised, registered, incentivised and with awareness created among charcoal makers, they could exert considerable influence on the trade, including the implementation of sustainable measures to reduce deforestation. Improving kilns and stoves is a strategic point for intervention due to their contribution towards wastage.

Demand side measures to control or regulate operations of charcoal merchants would include fair trade regulations and the application of chain of custody monitoring requirements.

Figure 2: Charcoal trade chain

Key: bolded text show stages in the trade chain prioritised for demand-side measures.
Public institutions
Several institutions such as schools, hospitals, prisons, and factories rely on charcoal for cooking and heating. It is estimated that in Tanzania about 69 per cent of charcoal is consumed in households, 16 per cent in hotels, 11 per cent in institutions, 3 per cent in industries and 1 per cent in other contexts (World Bank, 2009). Due to the large volumes consumed by these institutions and the relatively limited number of entities, it is likely they could influence implementation of demand side measures by adopting sustainable procurement procedures.

Households
Households in cities and rural areas use charcoal for cooking and heating. About 69 per cent of charcoal is consumed in households, especially in urban areas, as it has been identified as an affordable and acceptable energy source. Although consumption by households exerts considerable influence on the charcoal trade, household consumers are not organised and the majority may not be aware of the risks of charcoal making to forests and the environment. Demand side measures such as community awareness creation, alternative sources of energy, less wasteful cooking technologies and the organisation of consumers into pressure groups are expected to influence the sustainability of production and reduce deforestation risks.

Existing and potential demand side measures
Existing and potential demand side measures in the charcoal value chain (Table 2) include legislation on sustainable charcoal production and trade as well as tree planting, reforestation programmes, the introduction of efficient kilns among the private sector organisations, mobilisation and awareness.

Table 2: Opportunities for demand-side measures for charcoal

<table>
<thead>
<tr>
<th>Strategic point in trade chain for intervention</th>
<th>Description of demand-side measure</th>
<th>Public sector</th>
<th>Private sector (formal and informal)</th>
<th>Associations and roundtables</th>
<th>Civil society</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Charcoal makers</td>
<td>- Tree plantations conducted by charcoal makers - Licensing and registration</td>
<td>- Subsidising improved kilns - Reforestation programmes - Creation of tree nurseries - Promote ISO sustainability criteria</td>
<td>- Reforestation - Efficient kiln manufacturing</td>
<td>- Creation of kiln manufacturers association - Capacity building on best practices on charcoal making</td>
<td>- Community mobilisation and awareness creation</td>
</tr>
<tr>
<td>2. Public institutions</td>
<td>- Improved charcoal stove directives</td>
<td>- Subsidising the institutional use of improved charcoal stoves</td>
<td>- Accreditation of installers</td>
<td>- Sensitisation and awareness raising</td>
<td>- Community mobilisation and awareness creation</td>
</tr>
<tr>
<td>3. Households</td>
<td>- Improved charcoal stove directives</td>
<td>- Subsidising and promoting of improved charcoal stoves</td>
<td>- Accreditation of installers</td>
<td>- Sensitisation and awareness raising</td>
<td>- Community mobilisation and awareness creation</td>
</tr>
</tbody>
</table>

2.3.3 Tobacco

Prioritised stakeholders for demand side interventions

Tobacco processors depend on locally produced leaves and imports, processing them into cigarettes and other minor products. The trade chain includes a few large processors who tend to control operations. Key stakeholders that can exert considerable influence within the tobacco trade chain and possibly on the implementation of demand side measures include the leaf processors and local manufacturers (Figure 3), with their potential in terms of demand side measure implementation presented below.

Figure 3: Tobacco trade chain

Production

Growers Association — Local lead sources (small and larger growers) — Imported leaf

Processing and manufacturing

Market Centre (e.g. in Kenya: British American Tobacco, Alliance One International, MasterMind Tobacco Kenya)

Leaf processing companies

Local manufacturers (e.g. Tanzania Cigarette Company, MTK, BAT)

Distribution

Local market — Export

Retailers

Consumption

Consumers

Key: bolded text show stages in the trade chain prioritised for demand-side measures.
Leaf processors and local manufacturers

These are companies that buy green leaf tobacco from farmers in the field and later sell processed tobacco to domestic and export markets. In 2014, companies operating in Tanzania included Tanzania Leaf Tobacco Company Ltd., Alliance One Tobacco Tanzania Ltd., Premium Active Tanzania Ltd. and Tanzania Tobacco Processors. In Kenya, the three major processors were British American Tobacco (BAT) (Kenya) Ltd., Mastermind Tobacco (Kenya), and Alliance One Tobacco International.

In Tanzania there are very few processors, and they can exert considerable control on the trade chain. Three cigarette manufacturing companies exist, including Tanzania Cigarette Company (TCC/Japanese Tobacco International), Mastermind (Tanzania) Ltd., and the Zanzibar Cigarette Company. They have organised into a strong tobacco buyers association known as the Association of Tanzania Tobacco Traders (ATTT).

Leaf processors and local manufacturers are in a good position to influence tobacco growers as well as consumers because they normally contract farmers directly and therefore control prices. They also monopolise the trade chain, since the same leaf processor companies are also local manufacturers of cigarettes as well as exporters.

Existing and potential demand side measures

Existing and potential demand side measures for the tobacco trade are summarised in Table 3. In addition to the existing legislation and policies, the group suggested enhancing law enforcement and promoting carbon credit measures. For the private sector, the suggested interventions included improving curing technologies to reduce fuel wood use, compliance to international standards and regulations, as well as increasing corporate social responsibility to cover reduced deforestation, and awareness creation.

High demand for energy during tobacco processing is among the main challenges facing the sector. One intervention to address the deforestation risk could be to enforce existing laws and regulations. Other existing interventions such as tree planting and woodlot establishment could be intensified to benefit from carbon trade if well organised. Another measure could be to introduce a tobacco afforestation levy to contribute towards afforestation initiatives in tobacco production areas. Civil society could play an important role in advocacy and awareness creation regarding the tobacco commodity and its link with deforestation. As a means to improve production and reduce energy needs for curing, undertaking research to develop improved varieties in terms of productivity and curing was proposed. The flue tobacco variety – which requires wood fuel for curing – is the most preferred in the market, while existing varieties that are cured by air are less preferred. Consequently, the group proposed that the private sector endeavours to develop varieties that could have a similar taste to flue, but that can be air-cured.

Table 3: Opportunities for demand-side measures for tobacco

<table>
<thead>
<tr>
<th>Strategic point in trade chain for intervention</th>
<th>Description of demand-side measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Leaf processors</td>
<td>- Requirements for Strategic Environment and Social Impact Assessment</td>
</tr>
<tr>
<td></td>
<td>- Development of guidelines on research of improved varieties</td>
</tr>
<tr>
<td></td>
<td>- Enhance law enforcement</td>
</tr>
<tr>
<td></td>
<td>- Promotion of carbon credit measures</td>
</tr>
<tr>
<td>Private sector (formal and informal)</td>
<td>- Improvement of technology on curing</td>
</tr>
<tr>
<td></td>
<td>- Compliance with international standards and regulations</td>
</tr>
<tr>
<td>Associations and roundtables</td>
<td>- Enhance corporate social responsibility</td>
</tr>
<tr>
<td>Civil society</td>
<td>- Certification</td>
</tr>
<tr>
<td></td>
<td>- Farmers associations</td>
</tr>
<tr>
<td></td>
<td>- Introduction of tobacco afforestation levy</td>
</tr>
<tr>
<td></td>
<td>- Advocacy against deforestation</td>
</tr>
<tr>
<td></td>
<td>- Awareness creation</td>
</tr>
</tbody>
</table>
2.3.4 Maize

Prioritised stakeholders for demand side interventions

Maize millers, merchants and traders, and government agencies were identified as three key actors along the maize trade chain along the maize trade chain that can exert considerable influence on the implementation of demand side measures (side measures ( ), with their potential in terms of demand side measure implementation presented below.

**Large and small millers**

Maize millers are one of the key stakeholders in the value chain converting grains into consumable flour. They include large national maize millers and small-scale millers operating in rural areas, and processing about 60 per cent of the maize in Kenya. Maize millers buy maize directly from merchants and National Cereals and Produce Board (NCPB) stores. Some of the key companies include Interchick Co. Ltd., Mohammed Enterprise, Bakhresa Grain Milling Ltd., Tan Feeds, Mhega Investment, African Cereals Processors Ltd. in Tanzania, and Unga Group limited and Pembe Flour Mills Ltd. in Kenya. These processors package their products for onwards transition to distributors. Maize processors are well organised and highly efficient, and the quality of their products is high. Due to their large numbers and organisation into groups, cooperatives and societies, they are able to negotiate prices and set standards for their products.

**Maize merchants and traders**

Large, medium and small-scale traders are involved in trading maize and its products. They are key players in the distribution of maize from sources to processing centres as they buy maize directly from National Cereals and Produce Board, producers and middlemen. Some of the key large-scale traders include Mohammed Enterprise, Export Trading Co. Ltd. and Said Salum Bakhresa Tanzania. These traders buy and sell maize in local and export markets in the southern and northern areas of Tanzania. They have a number of buying posts in town areas which are managed by their own staff, but they also buy through networks of agents. They own large go-downs that enable them to buy large quantities when the price is low and store the maize until the price improves. Medium-scale traders have the capacity to handle reasonably large quantities of maize, and they involve agents and brokers in purchasing maize. They buy from large or medium farmers, either directly or from village collectors and small wholesalers, and their outlets include millers, exporters, the World Food Programme and also large traders.

Maize merchants and traders have considerable influence in the maize value chain, making their involvement in the implementation of demand side interventions or measures very important for reducing deforestation risks. However, due to the sensitivity and the competitiveness of their operations, it may be difficult to organise them into groups and associations. This group of stakeholders will therefore need clear incentives for the adoption of demand side measures.
**Government and government agencies**

In maize value chains, the government acts not only as regulator but also as merchant, with the National Cereals and Produce Board established to store and trade in maize in order to enable government implementation of food security measures (c.f. national food reserve in ). With the dual roles of regulation and trading in maize, the government becomes a key stakeholder in the value chain as it controls quantity supplied at different times and subsequently the prices.

Figure 4: Maize trade chain

Key: bolded text show stages in the trade chain prioritised for demand-side measures.
Existing and potential demand side measures

About 60 per cent of maize trade is currently in the informal sector, which is subject to little government control. This presents a challenge for the introduction and implementation of demand side measures. Legislation, policies and standards for maize flour and animal feed exist, but implementation is poor. In addition, existing animal feed miller associations are not very effective. Among other interventions, potential improvements include strengthened operational structures and transparency among players, the formation of a strong association to engage with government and producers, and the empowerment of traders and processors to ascribe to the International Organization for Standardization (ISO), domestic standards and certification schemes. Suggested interventions are summarized in Error! Not a valid bookmark self-reference.

Table 4: Opportunities for demand-side measures for maize

<table>
<thead>
<tr>
<th>Strategic point in trade chain for intervention</th>
<th>Legislation</th>
<th>Public sector</th>
<th>Private sector (formal and informal)</th>
<th>Associations and roundtables</th>
<th>Civil society</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Maize merchants and traders</td>
<td>- Review existing legislation to encompass the principles of fair trade</td>
<td>- Enhance storage of postharvest grains to reduce moisture content - Develop necessary infrastructure</td>
<td>- Improve operational structures and transparency - Enforce agreement between players</td>
<td>- Form a strong association to engage with government and producers</td>
<td>- Conduct awareness and sensitisation campaign</td>
</tr>
<tr>
<td>2. Large and small millers</td>
<td>- Assist formalising small millers - Duty exemption for processing equipment - Capture operations and capacity data</td>
<td>- Ascribe to ISO, domestic standards and certification</td>
<td>- Form an association for the purpose of self-regulation</td>
<td></td>
<td>- Advocacy targeting millers on issues of health, safety, environment</td>
</tr>
<tr>
<td>3. Animal feed processors</td>
<td>- Strengthen enforcement of existing legislation - Enhance hygiene, safety, environmental concerns</td>
<td></td>
<td>- Revitalise and strengthen animal feed association</td>
<td></td>
<td>- Advocacy to ensure standards are maintained</td>
</tr>
</tbody>
</table>

2.3.5 Livestock

Prioritised stakeholders for demand side interventions

Within the livestock trade chain, the selection of key stakeholders with potential influence was based on the relative quantity of live animals or meat traded and the sensitivity or importance of the actor within the chain. Based on the above criteria, the three stakeholders with most influence were listed as abattoirs/slaughter houses, butchers and consumers (Figure ), with their potential in terms of demand side measure implementation within the livestock value chain presented below.
**Abattoirs and slaughter houses**

Animals for beef production are delivered to abattoirs and local slaughter houses where meat, hides and skins are processed. In Tanzania, the largest livestock market and abattoir is in Pugu, near Dar es Salaam, handling 300-400 cattle daily. Pugu livestock market receives animals from 12 secondary markets around the country, including Singida, Tabora, Shinyanga, Kagere, Mwanza, Mbeya, and Mara. Cattle bought from primary and secondary markets are sent to slaughter houses and butchers for meat. Red meat (beef, goat meat and mutton) is mostly sold immediately after slaughter due to a lack of cooling and storage facilities. There are only three modern abattoirs in the country to date, the largest situated in Dodoma (although production has been scaled down due to operational problems), and other abattoirs with chilling facilities found in Rukwa and Manyara (Simanjiro). Meat from the slaughter houses is then sold to supermarkets, institutions and local butchers for the general public. In Kenya, many abattoirs and slaughter houses exist as almost all shopping centres have a slaughter house. At the national level, the Kenya Meat Commission slaughters animals and sells the products at local and export markets.

Abattoirs are strategically located to assess the conditions and suitability of all animals for human consumption, traceability as well as condition of rangelands, and thus can exert considerable influence on the meat trade. Demand side measures targeting the abattoirs are likely to be effective as they will influence all downside actors including the butchers and consumers.

![Livestock trade chain](image)

**Figure 5: Livestock trade chain**

- **Production**: Ranches (large farms) → Pastoralists → Agro pastoralists → Livestock market (livestock traders)
- **Processing**: Processor → Abattoirs/slaughter houses
- **Retail**: Wholesalers → Supermarkets → Butchers
- **Consumption**: Export → Public institutions → Direct market (households)

Key: bolded text show stages in the trade chain prioritised for demand-side measures.
Butchers
Butchers obtain meat from slaughterhouses and distribute to household consumers. Butchers are found in almost every town in Tanzania and Kenya, and are organised through associations. For example, the Tanzania Meat Processors’ Association represents traders and processors in all national fora and provides a united voice to the government through the Meat Board. Butchers have great potential to exert influence within the chain but the association and groups are weak and not well managed.

Consumers
Consumers can exert considerable influence in terms of quality and quantity traded, price and environmental issues. However, consumers in the domestic market often lack knowledge on meat quality and environmental issues related to livestock development. The introduction of demand side measures requires that considerable awareness is created regarding the risks and impacts of cattle-linked deforestation.

Existing and potential demand side measures
Demand side measures or interventions suggested for the three most influential stakeholders in the livestock (cattle) value chain are summarised in Table 5 below. Abattoirs and butcheries have the strongest voices and potential to influence the cattle and meat value chain due to the volumes of animals and meat they handle. They also have considerable control over the quality of meat for domestic markets. Although legislation exists on the quality, condition and origin of animals for slaughter at the slaughterhouses, enforcement is very limited. The group noted that standards for abattoirs in Tanzania are only at draft stage, while other legislation such as the Meat Quality Act exists and has to be enforced. New regulations need to be developed to reflect the current livestock movement situation internally and across borders. Other measures suggested include strengthening the regulatory institutions to enforce the correct regulations, establishing new institutions and strengthening existing associations, as well as creating awareness about the sustainable supply of livestock and meat products.

<table>
<thead>
<tr>
<th>Strategic point in trade chain for intervention</th>
<th>Description of demand-side measures</th>
<th>Legislation</th>
<th>Public sector</th>
<th>Private sector (formal and informal)</th>
<th>Associations and roundtables</th>
<th>Civil society</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Abattoirs and slaughter houses</td>
<td></td>
<td>- Standards for abattoirs</td>
<td>- Encourage public-private investment</td>
<td>- Facilitation to co-owners or set up abattoirs</td>
<td>Establish and strengthen associations</td>
<td>- Lobby for incentives and a conducive business environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Development of new regulations</td>
<td>- Set aside land for slaughter facilities</td>
<td>- Set up associations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Butcheries</td>
<td></td>
<td>- Strengthen the regulatory institutions to enforce the correct regulations</td>
<td>- Improvements to standards</td>
<td>- Form and strengthen associations</td>
<td>- Self-regulation mechanism</td>
<td>- Advocacy regarding meat hygiene</td>
</tr>
<tr>
<td>3. Consumers</td>
<td></td>
<td>- Awareness creation on meat quality</td>
<td>- Enforce existing regulations</td>
<td>Create a more competitive environment</td>
<td>- Create awareness</td>
<td>- Awareness campaign</td>
</tr>
</tbody>
</table>
3 Next steps

3.1 Media briefing

A media briefing was conducted at the end of the workshop with print and television media invited. Subsequent coverage of the event included:


3.2 Dissemination of workshop reports

A brief workshop report will be prepared and shared with workshop participants. Participants also agreed to identify other institutions which were not represented in the workshop but which seem to be important stakeholders. The workshop report would include an outcome statement that outlines the rationale for developing demand side measures, the definition and scope of demand side measures, and how progress can be made strategically based on workshop discussions.

In addition, participants were informed that a synthesis report for the two country studies would be produced.

3.3 Mainstreaming workshop recommendations

It was agreed that the workshop participants would conduct discussions with their respective organisations regarding the recommendations coming out of the workshop and the idea of coming up with a workshop declaration. Participants would also continue to work on streamlining workshop results into relevant legislative and strategic plans and reviews in Kenya and Tanzania.
Annexes

Annex 1: List of participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
<th>Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Ball</td>
<td>Mpingo Conservation and Development Initiative</td>
<td>Timber</td>
</tr>
<tr>
<td>Jackson Bambo</td>
<td>East Africa Wildlife Society/Kenya Forest Working Group</td>
<td>Timber</td>
</tr>
<tr>
<td>Tessier Dennis</td>
<td>ARTI</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Ahmed A. Jarwan</td>
<td>Said Salim Bakhresa &amp; Co. Ltd.</td>
<td>Maize</td>
</tr>
<tr>
<td>David Kirui</td>
<td>Kenya Bureau of Standards</td>
<td>Public</td>
</tr>
<tr>
<td>Matte Gallee</td>
<td>Tanzania Renewable Energy Association</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Charles Mwangi Gathage</td>
<td>Mastermind Tobacco (Kenya) Ltd.</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Bonaventura Ishengoma</td>
<td>Mhega Investment</td>
<td>Maize</td>
</tr>
<tr>
<td>Hakan Jonsson</td>
<td>Gaia Consulting Oy</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Sylvester Kalematu</td>
<td>Tanzania Tobacco Board</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Faustine Lekule</td>
<td>Sokoine University of Agriculture</td>
<td>Livestock</td>
</tr>
<tr>
<td>Manon Lelievne</td>
<td>ARTI</td>
<td>Charcoal</td>
</tr>
<tr>
<td>A. N. Mahenge</td>
<td>Mena Wood Co. Ltd.</td>
<td>Timber</td>
</tr>
<tr>
<td>Jasper Makala</td>
<td>Mpingo Conservation and Development Initiative</td>
<td>Timber</td>
</tr>
<tr>
<td>Edgar Masunga</td>
<td>Tanzania Forest Service</td>
<td>Public</td>
</tr>
<tr>
<td>Mathew Matimbwi</td>
<td>Tanzania Renewable Energy Association</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Appoloy Mbazzira</td>
<td>SNV Tanzania</td>
<td>Tobacco</td>
</tr>
<tr>
<td>Charles Meshack</td>
<td>Tanzania Forest Conservation Group</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Geoffrey Mukora</td>
<td>Ministry of Agriculture and Livestock, Kenya</td>
<td>Livestock</td>
</tr>
<tr>
<td>Lucas Mwago</td>
<td>Eastern Africa affairs on commerce and tourism, department of trade</td>
<td>Trade</td>
</tr>
<tr>
<td>Moses Ngebra</td>
<td>Development Associates Ltd.</td>
<td>Timber</td>
</tr>
<tr>
<td>Esaun Omollo</td>
<td>Kenya Forest Service</td>
<td>Timber/charcoal</td>
</tr>
<tr>
<td>Paul Opanya</td>
<td>Forest Stewardship Council</td>
<td>Timber</td>
</tr>
<tr>
<td>Jeremiah Temu</td>
<td>Tanzania Meat Board</td>
<td>Livestock</td>
</tr>
<tr>
<td>Paula Tommika</td>
<td>Gaia Consulting Oy</td>
<td>Charcoal</td>
</tr>
<tr>
<td>Wanaahlssack</td>
<td>Tanzania Livestock and Meat traders</td>
<td>Livestock</td>
</tr>
<tr>
<td>Hannah Wanjiru</td>
<td>Practical Action</td>
<td>Charcoal</td>
</tr>
</tbody>
</table>

Facilitation team

<table>
<thead>
<tr>
<th>Name</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simon Milledge</td>
<td>International Institute for Environment and Development</td>
</tr>
<tr>
<td>Robert Otsyina</td>
<td>Development Associates Ltd.</td>
</tr>
<tr>
<td>David R. Maingi</td>
<td>Development Associates Ltd.</td>
</tr>
<tr>
<td>Glory Paul</td>
<td>Development Associates Ltd.</td>
</tr>
<tr>
<td>Leianne Rolington</td>
<td>International Institute for Environment and Development</td>
</tr>
<tr>
<td>Mary Swai</td>
<td>TaTEDO</td>
</tr>
</tbody>
</table>
Annex 2: Keynote speech

Distinguished guests, ladies and gentlemen,

It is a great honour for me, on behalf of the Chief Executive of Tanzania Forest Service, to be with you at this very important workshop. Let me begin by expressing my profound gratitude to the organisers of this workshop for their gracious invitation to our institution to give a keynote to the participants of this workshop.

I wanted to share with you this morning a few thoughts on “demand side measures to address commodity driven deforestation in Tanzania and Kenya”. In my brief remarks today, I would like to address the following areas:

1. The loss of forest cover through deforestation and degradation
2. Demand side measures
3. Why demand side measures?
4. Studies conducted in Kenya and Tanzania
5. Results
6. Challenges
7. Opportunities

We live in an era where global commodity consumption continues to soar, and the planet is expecting some five billion new middle class consumers by 2030. Demand for palm oil, beef, leather, timber and biofuels is driving tropical forest conversion, damaging the livelihoods of forest-dependent people and forest ecosystem services.

Ladies and Gentlemen, given the points just covered, it is obvious that we need demand side measures to curb the situation.

The loss of forest cover through deforestation and degradation of forests and woodlands presents a range of economic, social and environmental threats to sustainable development and climate change at local and global levels. The loss of forest cover in Tanzania is about 400,000 ha/year, the disturbance by fire observed by the National Forest Resources Monitoring and Assessment of Tanzania (NAFORMA) is recorded to be 24 per cent of the forest while regeneration is only 4.2 per cent. The annual allowable cut is 64,750 million m$^3$, while consumption is 87,250 million m$^3$. There is a deficit of 22,500 million m$^3$.

The key message from these results indicates that consumption exceeds the legally available growth by 1/3; this creates a danger to the extinction of the protected areas. Natural forests, especially in the coast region of Tanzania, stand severe risks of deforestation and forest degradation from unsustainable extraction of products including timber and charcoal which are in great demand in urban areas such as Dar es Salaam. In Dar es Salaam for example, the number of households using charcoal for cooking increased from 47 per cent in 2001 to 71 per cent in 2007 (WB 2010).

According to a study conducted by the East African Wildlife Society (EAWLS) in partnership with Tanzania Natural resources Forum (TNRF) between May and October 2011, there is considerable movement of forest products across the borders between Kenya and Tanzania. Timber, logs for carvings, paper, gums, and furniture and fire woods are the main forest products transported across the borders. Most of this trade is illegal as it is either not accounted for, or crosses borders through unregulated and unofficial routes. Illegal trade of sandal wood between the borders of Uganda and Tanzania is huge and very destructive in Rumanyika, Ibanda and Kimisi game reserves. Trade of Sandal wood is contrary to the multilateral agreement on CITES. The species has been included in the list of endangered tree species which are under CITES for Tanzania. In addition to the increasing domestic demand between the partner states in East Africa, there is an increase in transportation of illegal timber to the Middle East and Far East.
Ladies and Gentlemen, given the points just covered it is obvious that we need demand side measures to curb the situation. Demand side interventions include:

- Legislative measures involve enacting or revising legislation. Examples are Timber Regulation, which prohibits the sale of illegally logged or traded timber and requires due diligence checks.
- Public sector measures use state implemented policy, agreements, directives or guidance, rather than a specific law. Examples include Voluntary Partnership Agreements (VPAs).
- Private sector measures may include certification schemes such as the Forest Stewardship Council (FSC)/ The Programme for the Endorsement of Forest Certification (PEFC); “roundtables” involving industry and civil society; voluntary disclosures (usually driven by civil society) and investor activism.
- Consumer measures may include consumer campaigns and boycotts, often using social media.

Why demand side measures?

Demand is so powerful that national regulatory and legislative measures to curb deforestation or improve governance for forest assets are often frustrated by illegal harvest and trade. The implementation of legislative measures in our countries is poor due to inadequate training, lack of facilities for enforcement, low numbers of staff and corruption. So it is increasingly imperative to involve “demand-side” interventions, ranging from loosely organised consumer campaigns through to certification schemes and to legislation in countries in efforts to limit commodity-driven deforestation. Demand-side measures, though they cannot directly improve forest governance, can limit the take up of forest risk commodities and support or catalyse governance reforms.

Ladies and Gentlemen, a scoping study was conducted in Tanzania and Kenya to identify effective demand side measures and opportunities for their implementation in order to reduce the impact of agricultural, energy and forest commodities on deforestation. The key deforestation risk commodities studied include, timber, charcoal, tobacco, maize and livestock (cattle).

Results of the study indicates that demand side measures such as import regulation, public procurement policies, bilateral initiatives, industry-led standards, certification schemes, multi-stakeholder roundtables and public awareness campaigns exist in different forms for various commodities. However, most of the legislation and policies address the supply side (production and quality) and governance issues, with very few demand side measures.

Stakeholders and actors along the timber, charcoal and tobacco value chains indicated considerable awareness on the impacts of the trade on deforestation and forest degradation. There was, however, limited awareness on legislation which required them to take specific action. Many stakeholders do not understand demand side measures and what they can do to address the sustainability of supply and environmental impacts.

Challenges

The biggest challenge in reducing commodity-driven deforestation is the huge and growing demand in Asian markets. International traders know that if Europe or North America acts to prevent imports of certain products, there is a ready and growing market in Asia, meaning many demand-side measures can be profitably sidestepped.

There is weak implementation and enforcement of legislation and policy measures at all levels (national, district and village). In the forest sector for example, legislation and public sector measures are in place and the framework for their implementation at the district and village levels also exists. However, implementation is poor due to inadequate training, lack of facilities for enforcement, low numbers of staff and corruption.
Opportunities
Most of the stakeholders contacted indicated the need and willingness to participate in measures which will ensure sustainability of supply and address environmental issues. We urge all stakeholders to collaborate and participate effectively in supporting supply and demand side initiatives aimed at sustaining supply of forest commodities and conservation of our forests. The results of the study and lessons learnt in Tanzania and Kenya will be useful in developing demand-side measures to address deforestation risks.

Conclusion
I want to conclude by praising the organisers of this workshop. This is not a job for development associates, Tanzania Traditional Energy Development Organisation or IIED alone. Every stakeholder invited has a part to play in achieving this. Together through cooperation we can achieve our goal. I hope your invitation to our institution is not by coincidence. Tanzania Forest Services is ready to support your effort in any way that we can.

Thank you for your attention.
Annex 3: Background on demand side measures (Simon Milledge)

Deforestation and drivers

- Deforestation a reality in East Africa
- Impacts not just environmental
  - Incomes and employment from products and services
  - Soil quality for food production
  - Supply of water and biomass energy
- Addressing ‘drivers’ of deforestation is necessary
  - Involves trade in agricultural and forest commodities
  - Need to involve players outside forest sector

Nature of commodity trade

![Diagram showing commodity trade flow](image)

Supply side measures:
- Land tenure, local context
- Land use planning
- Sustainable agriculture
- Legislation, taxation
- Private forestry
- Community NR mgmt
- Watershed management

Demand side (trade/market) measures:
- All necessary
- Complementarity key for sustainability

International context

Legislation

http://pubs.iied.org

- Import regulations - EU, US, Australia

Public sector measures

- FLEGT/VPAs, EU RED, procurement policies

Private sector measures

- Forest certification, commodity roundtables, industry-developed standards/codes, voluntary moratoria, voluntary disclosure, investor activism, supply chain management

Consumer measures

- Consumer campaigns, boycotts, social media
Benefits and incentives

- Long-term security of supply, markets and tenure
- Improves trade chain partnerships and stakeholder relationships
- Improves competitiveness (enhanced supply chain efficiencies, better quality and high premium products, positive public image)
- Complements and reinforces efforts on the supply side
- Stimulates or creates niche markets
- Creates a more level playing field
- Redistributes risks and benefits along the supply chain and favoring products with higher environmental and social standards
- Opportunities for government and industry to work together

Lessons learned

- Strategic and coordinated ‘mix’
- Support to sustainable commodity suppliers
- Price premiums don’t always trickle down
- Reduce costs to help boost demand
- Transparency and monitoring
- Identification system – certification & standards
- Action at local level
- Understand and engage with emerging markets

East Africa considerations

- Different types of commodities
- Primary and secondary markets, with supply and demand distinction not always clear
- Majority traded domestically & growing
- Large informal sector
- Smaller-scale producer needs
- Local context re political economy

How to use demand-side measures to help ensure long-term security of supply, markets and tenure?
Annex 4: Potential for demand side measures in Tanzania (Robert Otsyina)

Current national trends
- Increasing populations at rate of 3.0% (48 million)
- Land degradation - over 60% of the country is affected by land degradation as a result of increasing human activity.
- Global and national demands for food and wood commodities increasing rapidly
- Subsequent increases in commodity trade
- Increasing deforestation and land degradation:
  - overgrazing (49%), deforestation (27%) and unsustainable agricultural practices (24%).
- Low resilience to climate change effects

Forest Resources Situation
- Total forest - 48.1 mill ha.
- 55% of land area of Tanzania is forest and woodland.
- About 400,000 ha of forest is lost each year.

Main causes of deforestation and forest degradation
- Agricultural expansion into forest areas
- Firewood and charcoal production
- Timber extraction
- Overgrazing
- Uncontrolled fires
- bio-fuel production
Underlying causes of deforestation

- Increasing demand for forest products.
- Market failures including open access exploitation, incomplete information and imperfect competition.
- Risk of over-exploitation and general resource degradation.
- Poor knowledge of environmental consequences among chain stakeholders.
- Low forest rent which creates an incentive for inefficient use and over-exploitation.
- Ineffective implementation of legislation and forest policies which fail to adequately address emerging opportunities and constraints.

Potential deforestation risk commodities

- Timber
- Charcoal & firewood
- Tobacco
- Tea
- Cereals and legumes (maize, sorghum, simsim, sunflower)
- Livestock (Cattle)

Criteria for Commodity Selection

1. Area covered by commodity,
2. Amount of forest lost as a result of the commodity,
3. Trends (increasing/decreasing of production),
4. Future projections (which part of country and to what degree is pressure on forests going to be seen most) and
5. Pressure exerted by the commodity on forest resources and the environment - increasing or not.
Timber and charcoal measures

- Legislation

- Public Sector measures/intervention

- Private sector measures
  - FSC certification schemes, ISO certification system (ISO), regulations of stakeholder meetings organized by TFS and Business council.
  - Corporate social responsibilities.

- Civil Society measures/advocacy campaigns
  - Awareness campaigns on sustainable harvesting – such as Mama Masatu campaign-TNRF, WWF, TFGG/MJUMITA, TAREDO, Tanzania Association of Foresters, etc.

Tobacco Measures

- Legislation.

- Public Sector measures
  - Agriculture and food security Policy 2011,
  - ASDS, & ASDP, TBS standards

- Private sector measures
  - Association of Tanzania Tobacco Traders (ATTI)
  - regulations, Tobacco Farmers Association, Tanzania tobacco processors association, Tobacco Grading schemes.
  - Certification and compliance to international quality and environmental standards such as GAP.

- Civil Society
  - NGO advocacy groups
  - Eliminating Child Labour in Tobacco Growing (ECLT) Foundation

Maize Measures

- Legislation

- Public Sector measures
  - Agriculture and food security Policy 2011, ASDP, National Trade policy 2003,
  - National Standards for Cereal by TBS, ISO certification system (ISO 22 000), EAC Maize Quality Standard.
  - TCCIA and Agriculture council of Tanzania.

- Private sector measures
  - Regulations of Feed processors Association of Tanzania

- Civil Society
  - NGO advocacy groups such as ACT, WVI, CARE Tanzania.
Livestock (Cattle) Measures

- **Legislation**

- **Public Sector measures**
  - Livestock Policy of 2007, Livestock Trade Regulation and Food Safety, Quality and Food Safety standards,
  - Livestock grading and inspections at selling points,

- **Private Sector measures**
  - Tanzania Livestock and Meat Traders Association (TALIMETA), 2007,
  - Tanzania Meat Processors Association (TAMERA).

- **Civil Society**
  - NGO advocacy groups including Heifer, International, SNV, WVI, OXFAM.

Challenges and lessons learnt

**Challenges**

- Key legislation to address supply side (production and quality) and governance issues and very little emphasis on demand side measures.
- Awareness on legislation on trade, sustainable supply and environmental issues is very low.
- Poor understanding and knowledge on demand side measures and what they can do to address sustainability of supply and the environment.
- Many of the legislative measures are new and have not had time to show results.
- Weak implementation and enforcement of legislation at all levels (National, District and village).
- Implementation limited by inadequate training, lack of facilities for enforcement, low numbers of staff and corruption.

Challenges Continue

- Much of the trade in the timber, charcoal, maize and livestock sectors is informal.

- Increasing demand in neighboring countries such as Kenya for illegal products from Tanzania and emerging markets is Asia which has no regards for certified goods.

- Limited compliance on cooperate social responsibility.

- Low commitment on issues concerning environment and sustainability.
Opportunities for demand side measures

- Willingness to participate in measures which will ensure sustainability of supply and address environmental issues.

- Legislation on supply, demand and governance already exist but implementation as well as institutional frameworks are weak.

- Good opportunities exist in all commodity chains to build monitoring and compliance capacity among the chain actors to improve quality and sustainability.

- Commodity associations exist and if strengthened can provide conduits through which demand side measures can be promoted.

Opportunities Continue

- Opportunities for training and capacity building on implementation of potential demand side measures.

- Existing structures such as local NGOs, Community Based Organizations, and district level extension services exist and can be engaged for awareness creation and advocacy on all chains.

- The growing demand and trade in all commodities signifies more pressure on forests leading to deforestation and degradation. This will likely trigger private sector support for sustainability measures.

Recommendations

1. Promote clarity and understanding of jurisdiction and responsibilities of national, regional and local authorities over the allocation and control of forest resources to minimize corruption.

2. Initiate a participatory process to develop and implement suitable demand side measures.

3. Ensure transparency and accountability among stakeholders.

4. Increase awareness on demand side interventions among chain actors and stakeholders.

5. Strengthen commodity organizations to implement demand side measures.

6. Support and promote awareness and advocacy campaigns by civil society organizations.
Annex 5: Potential for demand side measures in Kenya (David Maingi)

**Presentation Outline**
- Introduction
- *Deforestation drivers*
- Deforestation risk commodities
- Current demand and trade situation
- Existing demand side measures
- Challenges
- Opportunities
- Recommendations

**Introduction**
- 18% of Global GHGs emission is through Deforestation
- Only less than 30% of Kenya is arable rest is ASALs (Low rainfall)
- Increasing population hence increased demand for wood, food crops and Income generating activities
- Decreasing land productivity subsequently more land conversion, rise in poverty levels, increased non sustainable commodity trade.

**Introduction cont.**

*Current Position in Kenya*

<table>
<thead>
<tr>
<th>Wood Demand</th>
<th>41.7 mill cu. m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Supply potential</td>
<td>51.3 mill cu.m.</td>
</tr>
</tbody>
</table>

S – D = -10mill m³

Short fall 10mill cu m.

*Non sustainably sourced through Deforestation and degradation of 54,000 ha per year*

*Supply side measures aims at increasing supply*

*Demand side measures aims at reducing demand*
Deforestation and degradation drivers

- Conversion of forests into agricultural and other uses approx. 54,000 ha
- Wood fuel production (charcoal and firewood)
- Non sustainable agriculture and trade - eg shifting cultivation, overgrazing and unfair trade practices
- Illegal & wasteful wood extraction for poles, sawn timber, industrial expansion etc.
- Uncontrolled fires consuming 3000ha per year.

Underlying cause of deforestations

- Increasing demand for agricultural products than supply
- Non sustainable marketing and utilization practices (illegal sourcing, wasteful utilization)
- Poor resource awareness, low capacities among forest, land and tree owners (result Under valuation)
- Poverty - over reliance on natural resources on undervalue resource
- Non effective policies and guidelines (in adequate, non implemented, conflicting non responsive)

Potential deforestation risk commodities

- Timber
- Maize
- charcoal
- Firewood
- Livestock (cattle)
- Tea
- Tobacco
Criteria for Commodity Selection
List of risky commodities was long but the main five were selected based on:-

1. Area covered by commodity,
2. Amount of forest lost as a result of the commodity,
3. Trends (increasing/decreasing of production),
4. Future projections on quantity to be consumed
5. Pressure exerted by the commodity on forest resources and the environment – based on people involved and dependence on the commodity

Maize Measures

- Legislation
  National cereals and produce act (cap 338), The Standard Act, Cap 130, 2009, Agriculture act, Food security Act, Kyoto Convention on environment (UNFCCC), WTO agreements

- Public Sector measures
  Agriculture Policy, Trade policy, Comesa guidelines, Standards policy and guidelines, Flour millers licensing guidelines, Cereal and Produce Regulatory guidelines, KEBs guidelines, Flour milling permits conditions, NCPO regulations, County Governments rules

- Private sector measures
  Cooperative rules and guidelines, maize millers regulations, ISO certification, Organic certification

- Civil Society
  NGO advocacy groups such as ACT, WVI, CARE Tanzania

- Consumer measures
  Consumer federation of Kenya activities

Livestock (Cattle) Measures

- Legislation

- Public Sector measures
  Livestock Policy, Livestock Trade Regulation and Food Safety, Standards policy guidelines, meat inspection guidelines, Quantitative and zoning guidelines, Livestock grading and inspections at selling points, Animal transport permits

- Private Sector measures
  ISO certification, Meat abattoirs regulations, Meat distributors ass., Organic certification, Halal and Kosher certification, trade licenses

- Civil Society
  NGOs

- Consumer measures
  Consumer federation of Kenya activities,
Timber sector measures

- Legislation
  Forest Act 2005, Agriculture Act, Timber act, Standards Act cap 696, Agriculture Act (more Section), Crop production and livestock Act and County government forest by laws. Wildlife conservation act, Standards act and Environment Management and coordination act EMMCA.
- Public Sector measures/intervention
- Private sector measures
  FSC Chain of custody certification schemes, ISO certification system (ISO), Saw millers association regulations, Timber grading rules,
- Civil Society measures/advocacy campaigns
  CAFA activities, Media campaigns, NGOS - FAN, Conservation groups KFWG, Timber yard associations rules.
- Consumer Sector measures
  COFEK

Wood fuel (fire wood and charcoal) measures

- Legislation
- Public Sector measures/intervention
  Energy policy, Forest policy, Environment and development policy, The forest Charcoal rules, Charcoal and fuel wood licensing condition, Transport permit
- Private sector measures
  FSC certification schemes, ISO certification system (ISO), Charcoal dealers association, County charcoal and firewood committees
- Civil Society measure
  Conservation NGOs, KFWG, WWF, Energy saving societies
- Consumer measures
  COFEK, Kuni Moja groups regulations,

Tobacco Measures

- Legislation.
  Tobacco control act, Agriculture Act, Crop production and livestock Act, Standards Act, Public Health Act
- Public Sector measures
  Crop production and livestock policy, KEBS guidelines on Tobacco, Public health rules, KARI guidelines
- Private sector measures
  Tobacco Farmers Association, eco labeling, ISO certification, Organic certification.
- Civil Society
  NGO advocacy groups,
- Consumer measures
  COFEK
Challenges and lessons learnt

- Legislations address supply side and governance issues with non or little emphasis on demand side measures.
- Limited Awareness on conservation impact by Demand side measures.
- Non harmonious policies and guidelines, Poor or inadequate implementation and enforcement
- Some measures not sensitive to changing products and market environments
- Profit optimizing stakeholders see demand side measures as costs with no incentives to adopt them
- Non Sustainable agriculture and Forestry practices create a non conducive environment for effective measures.
- Funding is a challenge in technology improvement and capacity building

Opportunities for demand side measures

- Impact of Climate Change are real and stakeholders are looking for measures to control causes
- Legislations, policies and other measures exist but implementation as well as institutional frameworks are weak.
- Incentives exist to be used to make stakeholders adopt demand side measures.
- Institutional frameworks exist for effective implementation of demand side measures.
- Good opportunity IS that Kenya is currently reviewing the forest policy, drafting the National REDD strategy, Reviewing the Forest act to conform with new constitution.
- International markets and development partners are demanding sustainable practices in Forestry and Agriculture.
- We are THERE willing and capable to drive the measures home

Recommendations

1. Capacity building, awareness creation targeting specific stakeholders aggressively be done
2. Streamlining of demand side measures into existing legislations and policies during the ongoing reviews as required by new constitution
3. Step up effective implementation and enforcement of existing measures ensuring sustainable practices through improved governance for accelerated adoption.
4. Formation of associations among stakeholders to quicken address of pressing challenges like awareness and non sustainability
5. Participatory processes in reviewing existing measures to introduce synergy, closing loop holes and introducing sensitivity to changing markets and products.
6. Identify and promote incentives that catalyze adoption of acceptable demand side measures
Forests in Tanzania and Kenya are experiencing high levels of deforestation and forest degradation due to the unsustainable extraction of forest products including timber and charcoal, and the conversion of forests for agriculture. In 2013, the International Institute for Environment and Development (IIED) and Development Associates Limited (DASS) undertook a scoping study in Kenya and Tanzania to identify potential demand side measures to curb deforestation and degradation. In 2014, a workshop was held in Dar es Salaam, Tanzania, with the objective of sharing and capitalising on the results of the study with relevant stakeholders. This event report synthesises the proceedings and results of that workshop.