SUSTAINABILITY OF WOOD VALUE CHAIN IN UGANDA: bottlenecks and potentials

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Extent of the Industrial Forest Estate - Findings

• Various sources of a range of accuracies and mixed precision: need for forest inventory focusing of industrial plantations + Mapping of plantations
• Starting point for refinement

<table>
<thead>
<tr>
<th>Period</th>
<th>SPGS Small and Medium</th>
<th>Other stakeholders</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990 - 2003</td>
<td>67</td>
<td>2 756</td>
<td>2 823</td>
</tr>
<tr>
<td>2004 – 2013</td>
<td>15 757</td>
<td>29 586</td>
<td>45 343</td>
</tr>
<tr>
<td>2013 - 2019</td>
<td>23 000</td>
<td>13 155</td>
<td>36 155</td>
</tr>
<tr>
<td>Total</td>
<td>38 824</td>
<td>43 497</td>
<td>82 321</td>
</tr>
</tbody>
</table>
Projected Wood Flows: Pine

Estimated Area by WC Established 2004 to 2013 (ha)

<table>
<thead>
<tr>
<th>Period</th>
<th>Pine</th>
<th>Euc</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004 - 2013</td>
<td>39 056</td>
<td>5 777</td>
<td>515</td>
<td>45 348</td>
</tr>
<tr>
<td>%</td>
<td>86%</td>
<td>13%</td>
<td>1%</td>
<td>100%</td>
</tr>
</tbody>
</table>

- 2019 – 200 000 m³/year
- 2023 – 800 000 m³/year
- Long-term sustainable yield - of about One million m³/year: 5 times as current yield

With the current rate of afforestation it could go as high as 2 million m³/year
CERTIFICATION OF NURSERIES: a growing interest over years

- Number of certified nursery operators in constant increase:
  - About 30 in 2015,
  - 66 in 2017,
  - 102 in 2019
- In 2019, 201 applied but 50% were certified
At which level is the Uganda Forest Value Chain today?

- Era of Plantation Establishment: a successful PPP
  - Grants
  - Training
  - Land

- Era of Processing and Marketing is now critical Sustainability
  - Efficient Processing Capacity + skills
  - Financial resources need

- Value Addition
  - Sustainable Green Economy

- Limited incentives to invest
  - Skills
  - Land

- Successful PPP
Processing Capacity

- Currently an excess of capacity – many mobile mills not operating at full capacity;
  - About 5 boardmills (plywood, particle board, fibre board, MDF) and
  - 45 mobile mills (recovery between 25 and 40%), still very low

Under-utilised capacity is caused by:
- New area with limited skill
- Low market prices due to illegal timber trade and lack of standards to enhance quality and attract higher price
- Constraints on exports of timber

<table>
<thead>
<tr>
<th>Type of Processing Plant</th>
<th>Annual Round-log Intake (m³/year)</th>
<th>Product Output (m³/year)</th>
<th>Residue</th>
<th>% of Total Processing Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board - particle and MDF</td>
<td>168 000</td>
<td>118 000</td>
<td>50 000</td>
<td>35%</td>
</tr>
<tr>
<td>Plywood - veneer &amp; other</td>
<td>169 000</td>
<td>92 000</td>
<td>77 000</td>
<td>35%</td>
</tr>
<tr>
<td>Sawmills - Formal</td>
<td>54 000</td>
<td>22 000</td>
<td>32 000</td>
<td>11%</td>
</tr>
<tr>
<td>Sawmills - Mobile</td>
<td>89 000</td>
<td>31 000</td>
<td>58 000</td>
<td>19%</td>
</tr>
<tr>
<td>Total</td>
<td>480 000</td>
<td>263 000</td>
<td>217 000</td>
<td>100%</td>
</tr>
</tbody>
</table>
A huge potential market

- The extent of industrial plantations, particularly long-rotation pine plantations in the countries neighbouring Uganda is limited.
- Very important regional market: Kenyan prices ~ 25% higher than Uganda and are likely to increase (e.g. forthcoming project to build 25,000 timber houses).
- Substantial premium (270%) paid for wide boards (>8 in // 12x1x14).
- Uganda has developed a resource that is 20 years ahead of any of its neighbours and exports will drive demand.
A huge potential investment opportunity

✔ Once export restrictions are addressed and standards (timber grading and chain of custody) are in place, profitability increases significantly: The Internal rate of return (IRR) doubles and would be estimated at 15% (vs 7% currently)

✔ As the supply of timber increases Uganda will become a significant exporter to East African neighbours and also at the global level

✔ Uganda’s electricity costs are competitive at 80 percent of Kenya’s costs

✔ 35 investment business parks throughout the whole country
Investment in sawmill is high if ....

<table>
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<th>Timber prices increase (sell price)</th>
<th>Mill delivery price (buy price)</th>
</tr>
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<tbody>
<tr>
<td>Baseline</td>
<td>5% 10%</td>
<td>-10%</td>
</tr>
<tr>
<td>IRR Low</td>
<td>24% 35%</td>
<td>26%</td>
</tr>
</tbody>
</table>

Higher timber prices essential to profitability

Reductions in mill delivery price can make it profitable
Concluding Remarks

1. Large volumes will be coming onto the market in the next few years – going from 200,000 m$^3$/year to a sustainable 1.2 million m$^3$/year in 10 years.
2. Substantial investment into harvesting, transport and processing capacity is required.
3. Even with active development of the Ugandan market the supply will exceed domestic demand.
4. The Ugandan forestry sector is well-positioned to compete strongly in the regional markets.
5. Once timber standards are gazetted, this will allow grading of timber which will leverage quality and pricing.
6. Sustainability of the industry will be driven by (i) high recovery; (ii) access to global markets.
7. Forest certification and clustering are key to promote best practices in forestry.
Thank you