



# **Forest Products Development**

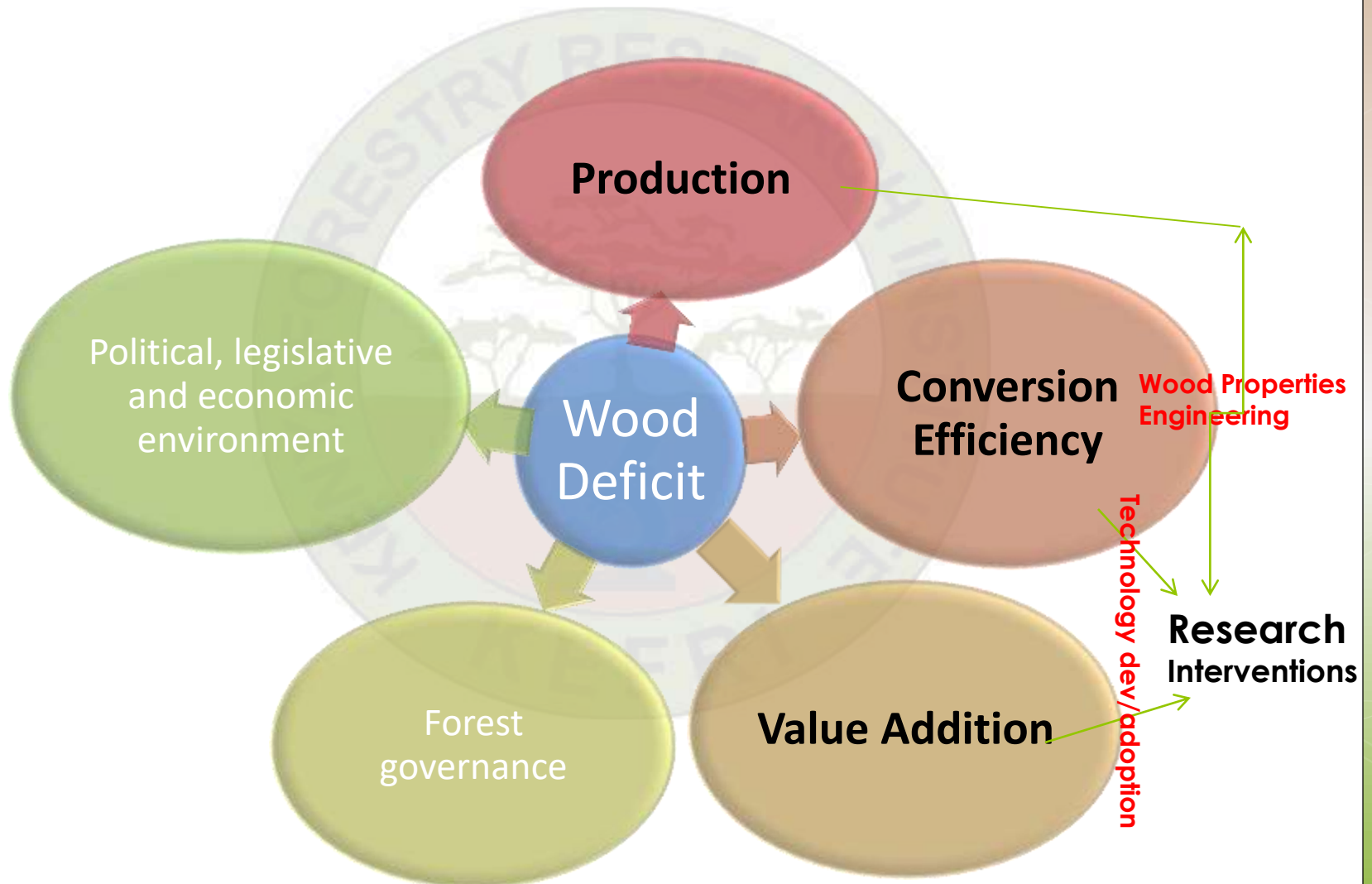
## **Technologies in Kenyan Wood Industry: Drivers and Inhibitors**

**Muthike G., Githiomi J.,  
Oduor N. and Mukoya, B.**

**Commercial Forestry  
Investment Conference**

**23<sup>rd</sup> – 26<sup>th</sup> Nov. 2021**

# Forest Sector Drivers and Interventions



# A Historical Walk with the Wood Industry

Year	Number of Mills	Remarks
1913-1915	1	Special Concessions
1920	<10	Initial Sector growth
1930	>10	Timber for settlers
1940	>20	Timber Export Market
1945 - 50	60	During & After WW(II)
1960 - 64	34	Independence battles
1970	200	Africanization
1980 - 85	370	Ban on Ind. Species
1990	361	Outside Forest Operations
1994 -99	450	Ban on SME operations
2012- 18	> 1000	Tech Revolution after ban
2018 – 21		Moratorium
2021	642	Various categories



## Forest Products Supply/Demand Scenario (2013)

Product	Supply (m <sup>3</sup> )	Demand (m <sup>3</sup> )	Diff (m <sup>3</sup> )
<b>Sawn Timber</b>	<b>7,363,414</b>	<b>5,262,624</b>	<b>2,100,790</b>
<b>Poles</b>	<b>3,028,907</b>	<b>1,409,482</b>	<b>1,619,425</b>
Fire wood	13,654,022	18,702,748	(5,048,726)
Charcoal	7,358,717	16,325,810	(8,967,093)
<b>Totals</b>	<b>31,405,060</b>	<b>41,700,664</b>	<b>(10,295,604)</b>
<b>By 2032 [20% Projected demand]</b>			<b>(12,354,725)</b>

❖ **Sawn Timber and Poles** – Low demand attributed to availability of substitutes (Steel and Aluminum trusses & Concrete poles etc)

❖ **Sector Response** – Improved Processing technologies

❖ Increase recovery & Improve product quality

❖ Reduce costs & product price

**(Ministry of Environment, Water and Natural Resources, 2013)**



# Wood Industry Categories

- Classification(KFS, 2021);
  - 14 large-scale with Integrated production of over 20 m<sup>3</sup>/day (**R > 60%**)
  - 90 medium scale sawmills with sawn timber production 10 – 20 m<sup>3</sup>/per day(**60>R>55%**)
    - Relatively high recovering machinery
  - 516 small millers using outdated and low recovery equipment with (**20 to 35%**).
  - 9 Composite Manufacturers
  - 27 Pole treatment

Wood consumption approx. 85%.



# Industry Drivers

- High demand for timber
  - ❖ Increasing Urbanization
  - ❖ Increased demand for modern housing
  - ❖ Increased demand for timber products
- Improved Technology
  - Efficient logging
  - Low power consumption
  - Low labour requirements
  - Smaller space requirement
  - High recovery
- Improved Infrastructure
  - ✓ Roads
  - ✓ Power (Electricity)
  - ✓ Water





# Industry Inhibitors

- Shortage of Quality raw material
  - Periodic bans and moratoriums
  - Inadequate silviculture
  - Defects in wood
- Forest Road Infrastructure
- Electricity
  - High cost
  - Unreliable supply and service
- Taxation
  - High and multiple
  - Unpredictability



# Industry Inhibitors .....

- Human Skills
  - Lack of active Practical training
    - Logging operations
    - Milling and Machine operations
    - Saw doctoring and saw mill maintenance
    - Mill management and records
- Cheap sub-standard imports
- Lack of business incubation facilities and mechanisms
- Lack of adherence to standards – Some inefficient technology still in use





# Key Interventions

- Forest management through;
  - Regular resource assessment to ensure sustainability and quality control
  - Improved silviculture (Tree growing for purpose)
  - Improved forest road infrastructure
- Support Farm forestry (including dryland forestry) for supplementary supply
- Streamline business licensing and taxation mechanisms
- Operationalize tailored training and incubation
  - Standardized production and value addition for local and international markets
  - Marketing and market linkages
- Protect local investors from cheap imports
- Invest in joint Research and development

# Opportunities for Diversification

- Timber Value addition
  - Timber grading
  - Seasoning
  - Cutting to Pre-determined Uniform lengths
- Laminated Timber Structures
  - ❖ Glulam, Cross Laminated Timber (CLT)
  - ❖ Composites from saw mill by-products
- Production of Small Utility Products
  - Matches
  - Tooth picks



## CONTACT DETAILS



P.O. Box 20412 – 00200  
Nairobi, Kenya



+ 254 722 157 414  
+ 254 724 259 781/2



[director@kefri.org](mailto:director@kefri.org)



[kenya forestry research institute](https://www.facebook.com/kenyaforestryresearchinstitute)



[@KEFRIHQ](https://twitter.com/KEFRIHQ)