

# The Role of Plantation Forestry for Promoting Sustainability in South Africa

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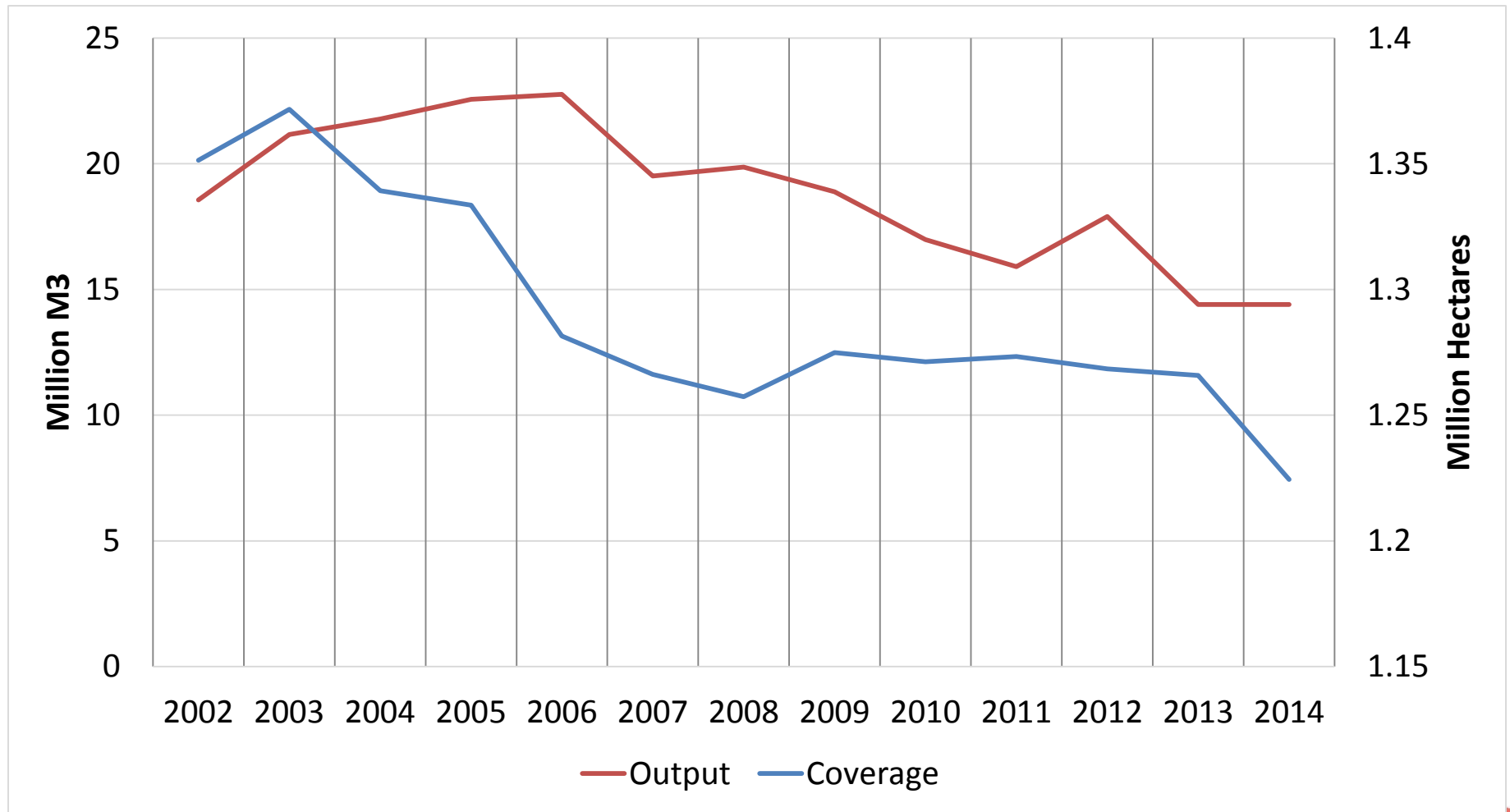
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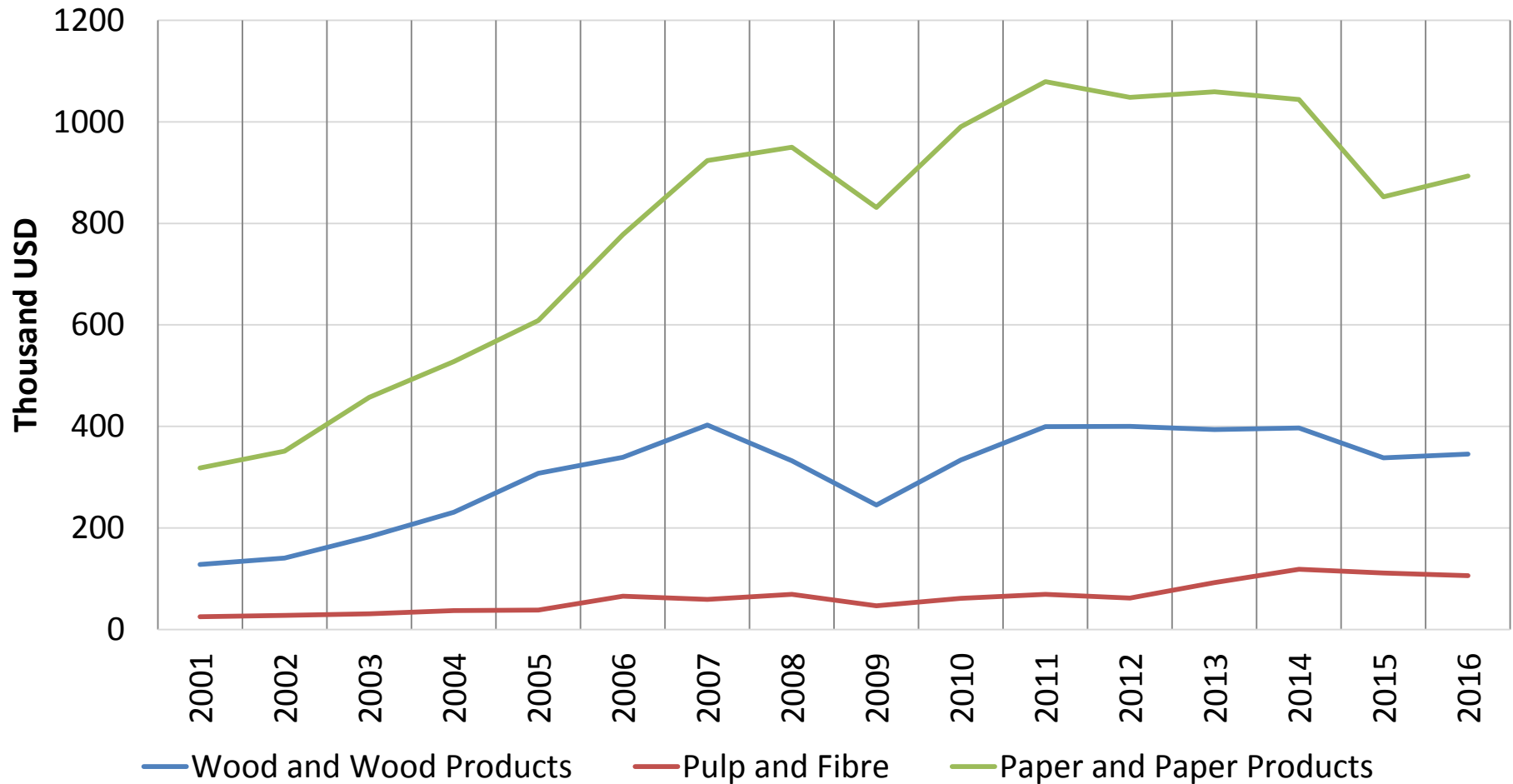
# Forestry Facts

- ▶ Approximately 1.5 million hectares
- ▶ Around 1% of the country's land surface area
- ▶ The commercial forest products industry as a whole contributed ZAR 31.1 billion to South Africa's GDP in 2015
- ▶ Accounted for 9% of overall exports
- ▶ 1.4% of national total employment: around 160 000 permanent, contract, and informal workers
- ▶ Sector supports livelihoods of between 534 000 and 692 000 mostly rural South Africans
- ▶ Aligns with NDP goals: reducing social ills, and integrating economy with regions and communities

# Declining coverage and production



# South African imports of wood, pulp, fibre, and paper products



# Prima facie considerations

- ▶ South Africa is a lightly forested country
- ▶ BUT it is also a water constrained country
- ▶ AND plantation forestry such as pine and eucalyptus are non-indigenous water-thirsty crops
- ▶ South Africa faces food security concerns, therefore:
- ▶ Is plantation forestry the best appropriation among land use alternatives?
- ▶ If wattle (i.e. Australian acacia) is permitted, is there a risk of further alien invasions?

# Why plantation forestry?

- ▶ It is the primary base of important value chains in wood, fibre, and pulp and paper industries downstream
- ▶ The industry has important potential linkages in terms of social, environmental, and economic benefits
- ▶ SA has 85% Forest Stewardship Council Certification – the highest in the world
- ▶ The industry contributes to diversification opportunities in the economy

# NBRES goals and SDGs

- ▶ It aligns with Strategic Objective 1 by providing substitute habitat
- ▶ Also contributes to rural socioeconomic development, job creation, and economic opportunities
- ▶ Objective 4: through the out-grower schemes which equip smallholders and communities with skills and resources
- ▶ Objective 5: through conserving land resources, promoting forest coverage, and safeguarding forest-dwelling biodiversity
- ▶ SDGs: 1, 10, 12, 13, and 15

# General environmental benefits

- ▶ Preservation of natural capital
  - Stores of ecological value in the form of forests themselves and areas within forests
- ▶ Carbon sequestration
  - Plantations themselves store carbon and carbon is recaptured upon replanting of new seedlings
  - Expansion (afforestation) can increase this benefit
- ▶ Edge effects
  - Plantation forests (and forests of any kind) can protect against the edge effects of deforestation and desertification



# Biodiversity spill-overs

- ▶ Plantation forestry provides substitute habitat for animal and plant life
- ▶ This is true for bottom-dwelling and middle-dwelling organisms despite the fact that the canopy of pine and eucalyptus are alien species
- ▶ However, better potential with pine because eucalyptus is hostile to certain plant species
- ▶ Protection of wetlands and riparian zones within the locus of plantations

# Land challenges

- ▶ Declines in coverage and production, in part due to recapitalisation challenges and global economic conditions
- ▶ Plantation forestry is a long-term investment
- ▶ General trend towards shorter rotation eucalyptus
- ▶ Few opportunities for expansion except in areas with disaggregated OR community land rights
- ▶ Land tenure security and replanting

# Water challenges

- ▶ Plantation forestry is the only Stream Flow Reduction Activity (SFRA) listed in the National Water Act
  - Need to assess whether forestry is a risk to water resources in all cases
- ▶ The Act requires plantations to obtain water use licences
- ▶ The process is beset with delays and the department has not fully eliminated the backlog on applications
- ▶ Forestry is water intensive but does not require irrigation

# Efficiency challenges

- ▶ Silvicultural improvements and improvements in the Mean Annual Increment (MIA) are not compensating for the declines in coverage and production
- ▶ SA becoming more reliant on imports of wood, fibre, and pulp and paper
- ▶ Downstream inefficiencies mean that industrial timber is not being used optimally
- ▶ Biomass is left on the forest floor which emits carbon and could be used for energy

# Opportunities

- ▶ Opportunities in the form of out-grower schemes to develop local skills and empower communities while safeguarding industrial timber supply
- ▶ Opportunities to make considered expansion in forestry where water factors will be limited
  - Some areas might be suitable for forestry – one-size-fits-all should not be the approach to licencing
- ▶ Opportunities to integrate the value chain to improve efficiency through the production process of several wood and paper products

# Recommendations

- ▶ Expedite land claims settlements and encourage partnerships between industry and communities to become co-beneficiaries of the industry
  - **Science interface: sector-based reporting**
- ▶ Alleviate the backlog on water use licencing to minimise delays
- ▶ Conduct pre-assessments on suitable locations for plantation forestry to aid growth in the industry
  - **Science interface: metrological maps to pre-identify locations**
- ▶ Industry to devise methods to improve resource efficiency (energy, water, carbon, land, inputs) by producing less waste and utilising by-products
  - **Science interface: Product cross-utilisation in the value chain**

# Caveats

- ▶ Land settlements and partnerships must benefit communities and allow continued access to food sources, cultural sites, and medicinals within forests
- ▶ Water licencing must remain mindful of alternatives (and potentially better uses of the land) regarding other challenges like water for human sanitation and food production
- ▶ In promoting efficiency and economic benefits, the ecological benefits must not be undermined (i.e. the shift to shorter rotation cycles must be discouraged)

# Trade & Industrial Policy Strategies

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through research and dialogue

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