

**SUSTAINABLE
WOOD *for a*
SUSTAINABLE
WORLD**

A Joint Initiative of the
Collaborative Partnership on Forests



PAPER

MANUFACTURERS ASSOCIATION
OF SOUTH AFRICA (PAMSA)



SW4SW AND THE BIOECONOMY

Jane Molony | Executive director | PAMSA

A photograph of a dense forest of tall, slender pine trees with green needles and brown trunks. The trees are arranged in a slightly curved line, receding into the distance. The sky is overcast and grey. A semi-transparent white text box is overlaid on the lower half of the image, containing the title and a definition. The bottom of the image has a solid green horizontal bar.

BIO-ECONOMY STRATEGY SA DEFINES THE BIOECONOMY AS:

*“Activities that make use of bio-innovations, **based on biological sources, materials and processes** to generate sustainable economic, social and environmental development. In the bio-economy the entire innovation system/network, **ranging from ideas, research, development, productisation and manufacturing to commercialisation**, should be used to its full potential in a coordinated manner.”*

Forestry industry in SA

Forestry sector is a key role player in SA contributing to the **three pillars of sustainable development**: social, environment and economic development.

Social

- **More than 150,000** jobs across value chain; *25,000 through small-scale timber grower initiatives*
- Outgrower scheme initiative
- Community forestry + value add projects (e.g. honey)
- Recreation and ecotourism

Environment

- Unplanted areas reserved for biodiversity conservation
- Carbon sequestration

Economic

- Contribution to GDP = R69bn, 1.5%
- Export value = R29.1bn
- Everyday products

Challenges faced by forestry

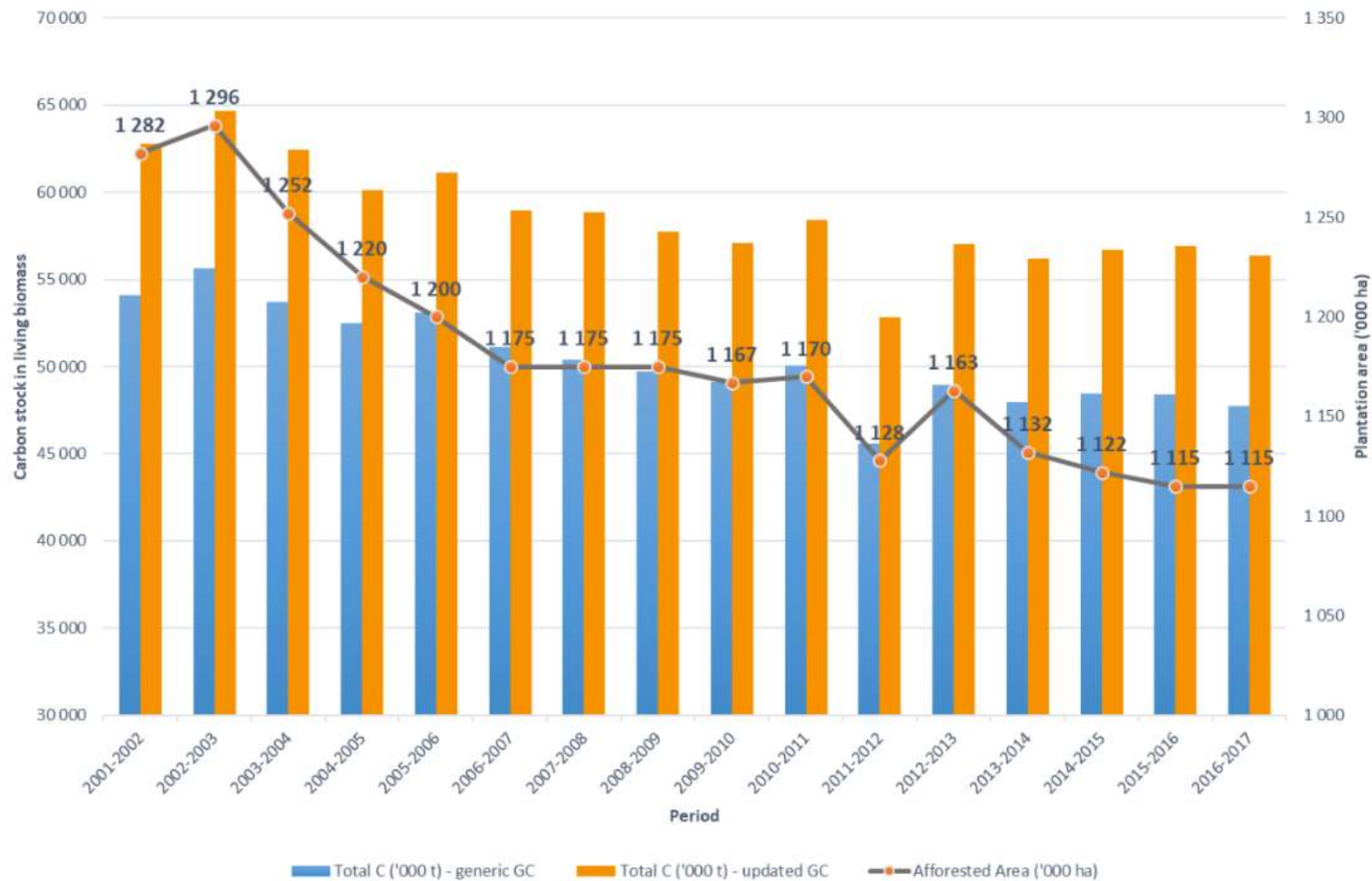


Area planted has declined steadily since 2006. Now covers area of **1.2 million hectares**.

Key constraints include:

- Onerous **water licensing** process for establishing new plantations.
- Impacts of **climate change** (esp. pests & disease).
- **Financial barriers to entry** of smaller growers
 - Also contributes to focus on hardwood, which has shorter rotation periods and quicker return on investment.

Forestry contribution to low carbon economy



Forestry contribution to low carbon economy

Although the trend in **area planted has declined steadily**, carbon stocks have remained relatively constant from about 2008.

Increase biomass growth per hectare of planted land – **valuable contribution to SA's transition to a low carbon economy.**

- Attributable to **increased growth rates through breeding and intensive forest management programmes**, including species-site matching
- Challenge is to **develop new processes and biomaterials** to extract more value from each tree – increase recovery rate from about 40% to 90%.

Bio-processes



PULP, PAPER & PACKAGING

Contributing R23.68 billion to economy

10 -12% to manufacturing GDP



PAPER RECYCLING

Active paper recycling programme **70% recovery rate**



SAWMILLS

Employs **30,000 people** in predominantly in rural communities



CONSTRUCTION

Innovative developments in **engineered wood**

Opportunity for **high-rise built environment and low-cost housing**

Bio-processes



BIO-ENERGY

Renewable energy from either bark, black liquor or sludge

REIPP programme
25 MW biomass project at Sappi Ngodwana

Fuel rod manufacturing – biomass and coal fines



BIOMATERIALS

Lignosulphonate - improve flow of concrete; dust suppressant

Extraction of hemicellulose sugar and lignin to make higher value products e.g organic acids, glycols and sugar alcohols, xylitol



WASTE BENEFICIATION

Composting, brick manufacture, anaerobic digestion

Research projects: enzymatic and pyrolysis techniques to create ethanol, bio-oils and char; bioethanol production; manufacture of bio-composites products that can be used in construction

Opportunities and potential abound!

Make the country more competitive internationally.

- **Create more jobs**
- **Create a greener economy** as the country shifts towards a low-carbon economy.
- **Promote the circular economy.**

Reconcile economic growth with environmentally responsible action.

PAPER

MANUFACTURERS ASSOCIATION
OF SOUTH AFRICA (PAMSA)

What do we need to do to promote a South African bio-economy?

Overcome regulatory barriers to increasing afforestation – **we need to plant more trees!**

Grow and extend value chains – **make more things from wood!**

Invest in and develop high level of research and technical skills – **explore the wonder of wood!**

Develop business skills – entrepreneurs and businesses create jobs!

Scaling up research to commercial implementation – costly.



**I talked to someone about
climate change,
and they told me:
“Sooner or later we’ll invest in
a machine that can capture
carbon from the atmosphere in
an efficient way.”**

**I told them that it already
exists.**

It’s called A TREE.

Author unknown.



THANK YOU.

*“Everything that can be made from fossils
can also be made from wood, at least in the
future.”*

Innventia Annual Report, 2015