

# Southern African Institute of Forestry

Delivering a professional service to forestry

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## Contents:

1. From the President's Desk: International Day of Forests and Other Important days in March (p.1)
2. The Rob Thompson Column : Celebrate the win whenever you can! (p.3)
3. Obituary : A van der Dussen (p.4)
4. How engineered wood can help the South African built environment decarbonise (p.5)
5. AI may hold a key to the preservation of the Amazon rainforest (p.7)
6. South African Weather Service commemorates World Meteorological Day (p. 8)
7. Seven things you didn't know have their roots in wood (p.9)
8. Ellepot gains momentum in the South African forestry market (p.10)
9. List of Protected tree species (p.11)
10. Finding biodiversity in timber plantations (p.11)
11. Offsets by Carbon stored in trees (p.12)
12. Upcoming Events (p.13)
13. SAIF Contact details.(p.14)
14. March and April Birthdays (p. 15-16)
15. SAIF Publications (p.17)

## From the President's Desk

### International Day of Forests and other important days in March

Each month of the year worldwide several special days and public holidays have been set aside to observe, celebrate or commemorate a specific theme or an important topic. Some of them are directly relevant to the forestry industry and -profession but not that many.

The month of March is probably an exception to the rule as we just celebrated the **International Day of Forests** with the rest of the world and incidentally also National Human Rights Day in South Africa on the same day namely the 21<sup>st</sup> of March. There are even another couple of days observed during March with which we can identify and which are also relevant to forestry. World Wildlife Day is observed on the 3<sup>rd</sup> of March, International Women's Day on the 8<sup>th</sup> of March as well as World Water Day on the 22<sup>nd</sup> and World Meteorological Day on the 23<sup>rd</sup> of March. Each of these are relevant to forestry in a way and there are some excellent examples of the positive contribution made by the industry and forest and forest products companies to address these issues. One example which springs to mind, is Water Day. Water courses, riparian zones and wetlands on most plantations are very well managed thanks to compliance with strict wetland delineation regulations. Forestry companies are also held accountable by Certification bodies requiring a high level of water monitoring. Many plantations are located in catchments of major rivers or important rivers cross plantations.



Logo of the International Day of Forests focussing on Innovation and new solutions for a better world



Riparian zones and wetlands are therefore often in a much better state on plantations and well managed compared to river courses on adjacent land. One can therefore rightfully argue that commercial forestry which has been classified as a streamflow reduction activity, and in particular well managed plantations, generally make a meaningful and positive contribution to both water quantity and -quality.

Other interesting days celebrated or observed during March are, World Engineering Day for Sustainable Development on the 4<sup>th</sup>, International Day of Happiness on the 20<sup>th</sup>, World Sleep Day on the 18<sup>th</sup> (Friday before Vernal Spring Equinox), Global Recycling Day on the 18<sup>th</sup>, World Consumer Rights Day on the 15<sup>th</sup> and International Day of Mathematics on the 14<sup>th</sup>. There are no less than 20 special days which are observed internationally during March. These don't even include religious days or periods like Ramadan and Easter (Passover) which this year also fall in March.

One certainly cannot be blamed for wondering what is being achieved by having so many special days. A day like World Plumbing Day and International Bagpipe Day which are also commemorated in the month of March, would probably only appeal to a limited number of people. International Women's Day and World Consumer Rights Day on the other hand, should have a much bigger observance. The Calendar is filled with many Important days and events in every month of the year, and many of them are observed with a particular theme in mind. Some events contribute to spreading awareness and remind us of sacrifices made in the past. Each of these days have a special meaning for at least someone.

World Wildlife Day is celebrated globally on the 3<sup>rd</sup> of March and is closely aligned with Sustainable Development Goal 12 that is Life without water, which focuses on marine species and highlights the problems and critical issues of marine wildlife to our everyday life.

International Women's Day is observed globally every year on the 8<sup>th</sup> of March to celebrate the social, economic, cultural, and political achievements of women. South Africa has its own Women's Day on the 9<sup>th</sup> of August. International Day of Happiness, which is observed on the 20<sup>th</sup> of March annually since 2013, has as objective to recognize the importance of happiness in the lives of people around the world.

World Meteorological Day is celebrated on 23<sup>rd</sup> of March every year to attract attention towards weather and climate for the safety and well-being of the society. On 23 March 1950, the World Meteorological Organisation came into force. The climate and weather are certainly topics which are discussed daily starting with what to wear and how to prepare for that day, all the way through to climate change and its impact on our daily lives.

World Forestry Day or International Day of Forests is celebrated every year to raise public awareness about the values, significance, and contributions of the forests to balance the life cycle on the earth. In 1971 i.e. 53 years ago, World Forestry Day was established at the 23<sup>rd</sup> General Assembly of the European Confederation of Agriculture.

To celebrate International Day of Forests on the 21<sup>st</sup> of March 2024, locally in South Africa, Forestry South Africa (FSA) hosted an excellent webinar on the 20<sup>th</sup> of March 2024 to re-visit the status of FSA funded Research in the forestry industry in S.A. and looking into the future. Many of you who read this Newsletter, would have attended (participated) and even presented during the webinar. Several top speakers did presentations at the Webinar. Dr. Ronald Heath, Ms. Jacqui Meyer and their team of facilitators and presenters should be congratulated with the excellent program and the quality of presentations. All participants were informed and reminded of the relevant, excellent, and exciting research done by scientists on various fronts all over the industry in South Africa. The benefits of these research projects are clearly visible and quantifiable while others are of a longer-term nature and results will still be forthcoming. A webinar such as this, remind us of the commitment by academic institutions and forestry companies facilitated and supported by FSA, to keep the S.A Forestry industry at the cutting edge and the forefront of technology and advancement of the industry despite major challenges like climate change, government policies and limited available and suitable land for growing timber and fibre in the country. It is also a fact that difficult and challenging times often unlock innovation and lead to new thinking and advanced methods to even "achieve more with less".

**Sources:** <https://www.jagranjosh.com/general-knowledge/important-days-in-march-1551182798-1>  
<https://www.internationaldays.org/calendar>



## The Rob Thompson Column

### Celebrate the win whenever you can!

If your experience is anything like mine, then this period of build up to the General Election is full of negative vibes.

The news is full of news of decay, crime and grime and politicians are seemingly hell bent on usurping each other by whatever means possible. "Service delivery" appears to be a misnomer and far better described by the phrase "Service absence". People encountered act stressed, no doubt in reaction to all of these outside influences impacting on their lives.

On our road trip back from the Cape Town Cycle Race we were nearing Beaufort West when the traffic density became distinctly high. In fact, so high that the traffic flow came to a dead stop and remained so interminably. Knowing the layout of the town we decided to take a chance and take the backroads in the hope that the cause of the stoppage was in the town centre and we could avoid such by exiting ahead of it.

That plan was doomed to failure. As we reached the other side of town via a rather dubious and cunning detour, we were rewarded by the sight of a fleet of massive abnormal load trucks carrying wind turbine blades and headed towards the N1.

A sleepy looking traffic officer leaning against his van saw us emerge from our side road and made his lazy way towards us. My mind immediately selected its well-used and built in "stereotype file" which when opened instructed me to expect the worst. The files' algorithm did a quick calculation indicating that on a balance of probabilities, and previous experience, this dude would add no value but nevertheless expect a "reward" without any record.

I lowered the driver's window and waited for the interaction to begin.

At that precise moment my inbuilt file crashed, and the tried-and-true forecasting algorithm short-circuited causing a blinding pain right in front of my eyes. The officer started the conversation with a polite and professional "Good Morning Sir" which, as you can imagine, created irreparable damage to any stereotypical analysis remaining in my trashed file. He even ventured to offer his assistance which action.

literally cross-wired the bulk of my remaining brain synapses, resulting in my mouth to open and me to lose control of all facial muscle control. I had to teach myself to speak once again, from scratch, and within the space of one minute lest the officer was to think that he was dealing with an imbecile.

The officer shared with us his conclusion (from observing my number plate) that we were headed to KZN and hastened to inform us that we are not going to reach our destination in any hurry given the mobile obstructions ahead of us. Clearly this man was oblivious to the ongoing brain damage that he was causing when he asked us, with a deal of concern, if we had eaten yet given that we were not likely to get any chance to do so soon.

By the time he had started to suggest alternative routes, my speaking lessons had allowed me to respond in small words of one syllable. "Yes" I managed to say, which translated meant "Yes, I would like to look at an alternative route!". The officer managed to hide his amusement at my communication attempt and rattled off a litany of alternative routes that I could consider including the added distances that I would need to travel.

The route permutations were too much for a brain that had lost its functionality and the officer resorted to kindly and slowly pointing out the route that I ought to follow. Fortuitously, a white car was travelling along a road, close to the distant horizon, and the officer pointed that out, simultaneously explaining slowly that I should follow the same trajectory as that car.

A voiceless thumbs up from me assured the officer that the message had been received and he then focused on explaining that he would have to get me across the traffic snarl up to launch me safely onto the alternative route. He instructed me to follow carefully and stepped bravely into the traffic melee. He waved at trucks to back up, pointed authoritatively at other drivers to move this way and that, and guided me methodically one meter at a time safely through the traffic line. Once on the other side, he returned to my window, tapped the vehicle on the roof and wished us a safe a pleasant journey ahead.

Without waiting, he turned and returned to his original position no doubt to be ready to assist someone else.

“What just happened?” I asked my wife as words with more syllables started to emanate from my mouth. We had no answer to that question. A helpful and polite traffic officer! Who would ever have thought. A most pleasant journey was then conducted with both of us enjoying an alternative and quiet route, and the feeling of euphoria after our exceptionally positive interaction with “our” officer.

My thoughts focused on the dire need to now recondition my to-date negative stereotypical expectations of service providers. A brain rewiring was required which would not be easy I reasoned. Fortunately, or unfortunately (dependent on the way you see things) this effort was not necessary. A roadblock just outside of Clarens revealed to us once again how certain susceptible individuals have fallen to external influences and turned them from value adders to takers.

The out of shape officer that attended to us could barely move to check my license disc and the manner in which he inspected my license card made us doubt his literacy capability. The curt flick of his head to get us on our way was a far cry from the excellent service that his counterpart had delivered a few hundred kilometers back.

It took all our effort to not fall into a pool of despondency as we left that block. My wife saved the day when she suggested that we consciously take the Beaufort experience as a win and celebrate that one as regularly as we can. We have subsequently shared that story many times with people and delight in the pleasure that they get from hearing a good news story.

I would therefore urge you all to identify the wins that you encounter and actively share these with others as opportunity presents to do so. Not only does it lighten the mood of both you and your listener, but with luck, the stories will spread and contribute towards a narrative that is more positive than the one that we are fed, and inadvertently accept, daily.

Just as “our” officer taught us...there is an alternative route. It takes effort to follow it BUT there are people out there willing to assist!

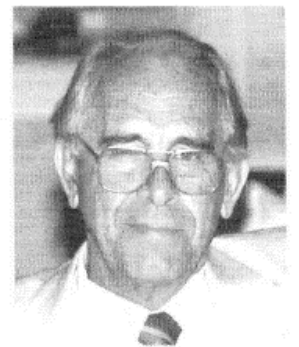
When you encounter them...celebrate the win!

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## Obituary : A. van der Dussen †



26 Jaar



59 Jaar

It was with great sadness that we learnt that Mr. A van der Dussen, one of the founder members of the Southern African Institute (SAIF), passed away on the 29<sup>th</sup> of February 2024 at the age of 93.

He was born in Lydenburg on the 26<sup>th</sup> of April 1930. He matriculated at Hoër Volksskool in Heidelberg now in Gauteng Province. He completed his BSc Forestry degree in 1951 at Stellenbosch University.

He started his career at the Department of Forestry and worked in the Western Cape, Southern Cape, former Northern Transvaal and - Eastern Transvaal. He became Assistant Director in the then Transkei in 1970 where he served until 1973. He was then appointed as Regional Director for the Southern Cape in 1974 which was followed by an appointment as Deputy Director Conservation Research in 1977. Here after he was appointed as Chief Director Forestry Planning in 1978. Between 1984 and 1990 and up until his retirement, he served as Deputy Director General at Department of Environment Affairs. He lived through numerous changes during his illustrious career in forestry and retired on the eve of the commercialisation of the State Plantations in 1992.

He served on numerous advisory and management boards including National Hiking Way Board, SU Faculty of Forestry and Saasveld School of Forestry and CSIR Committee for land ecosystems .

He was married to Dorothea née Steinman and one son, Nico and a daughter Cara were born during their long marriage. His grandson Rassie plays cricket for the Proteas.

He will be sorely missed but leaves a wonderful legacy.

**Source:** B. Bredenkamp; Die Suid-Afrikaanse Bosbouer, 2010



## How engineered wood can help the South African built environment decarbonise.

*By Roy Southey, executive director, Sawmilling South Africa*

Our planet is faced with both an environmental crisis and housing crisis. There is, however, a sector that is overlooked as a viable, renewable, and long-term solution to climate change and urbanisation.

Having recently attended the annual Wood Conference in Cape Town at the end of February, I was inspired to hear and see how timber is being used successfully in the built environment, not just in the northern hemisphere but also on home soil. From modern homes in an off-the-grid community in Mogale City to a learning centre in the Drakensberg, from a new home in Knysna or a rooftop extension to a Johannesburg home to the Green Point Education dome in Cape Town.

At the mention of wood, your mind's eye might only be able to conjure an image of a log cabin or "Wendy house", or perhaps a roof truss or timber flooring. It's unlikely that you imagined a multi-storey building made from cross laminated timber (CLT), a type of engineered wood for mass timber construction.

You're forgiven, considering that less than 1% of new South African houses use timber as the primary construction material. By comparison, some 90% of new houses in New Zealand are made of timber.

As a sector trying to promote the adoption of mass timber, we are faced with a long-held belief that brick-and-mortar is the only way to build homes, schools, and clinics. There are many misconceptions, not least of which being strength, durability, fire safety, and cost. Many people view wood as rudimentary or weak.

Mass timber uses technological advancements to engineer wood to have a stronger strength-to-weight ratio. In the case of CLT, thin layers of timber are laid crossways before being bonded and compressed together.

It's been said that wood isn't manufactured, it grows. From a South African perspective, the wood is sourced from sustainably managed tree plantations.

The construction sector accounts for 35-40% of global energy related CO<sub>2</sub> emissions<sup>[1]</sup>, with a large proportion (embodied emissions) attributable to the extraction, processing, and energy-intensive manufacturing of building products. The other main source is operational emissions from heating, cooling, and power generation.

Timber boasts a significantly lower carbon footprint compared to traditional building materials like concrete and steel. Timber also maintains a carbon-negative status throughout its lifecycle, from initial production to disposal, and it sequesters more carbon than it emits during processing and installation.

Our colleagues at the Stellenbosch University, Prof Brand Wessels and Dr Philip Crafford have published various pieces of research, highlighting the advantages of increased timber use in South Africa. Basic modelling analyses show that if the market share of wood-based buildings increases to 20% of new constructions, the embodied energy and global warming potential of the residential building sector could decrease by 4.9%.

As our population and economic migration increases, there is an urgent need to change how we build high density and single-family housing, quickly, cost-effectively, and sustainably.

There is a climate, economic and even social case for timber, and a significant opportunity for innovation, localisation, and employment creation. Several industry players, architects, construction engineers and producers are focused on making engineered wood more accessible to the local market. With this comes the need for upskilling or reskilling, business growth and employment opportunities.

Wood lends itself well to modern, modular, and off-site methods of construction, with improved efficiency and performance. Single and multi-storey buildings are prefabricated off-site, allowing for quicker on-site assembly, less journeys to and from site (and the associated carbon emissions), and minimised disruption, dust and noise.

Biased towards tried-and-tested steel and concrete, the public and private sector is reluctant to drive the use of timber in the built environment through

procurement policies.

Through initiatives such as the Forestry Master Plan, partnerships with the Department of Trade, Industry and Competition and forward-thinking academia, we want to shift the needle in favour of using locally grown and processed timber.

Both the University of Pretoria and Stellenbosch University have a strong wood science focus, and helping to educate a new generation of architects and construction engineers.

Dr Schalk Grobbelaar, senior lecturer and chairperson of the York Timbers Chair in Wood Structural Engineering in University of Pretoria's Department of Engineering & Technology Management, is a champion for our cause. He believes that a design-led approach is crucial to successful risk management where timber solutions are used, while also exposing people to possibilities that timber brings.

The uptake of timber represents a massive opportunity for our country and our planet. It's time to trust in timber.



Multidisciplinary students with their plywood scale version of a timber home

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[ii] Crafford, P. L., & Wessels, C. B. (2020). South African log resource availability and potential environmental impact of timber construction. *South African Journal of Science*, 116(7/8).

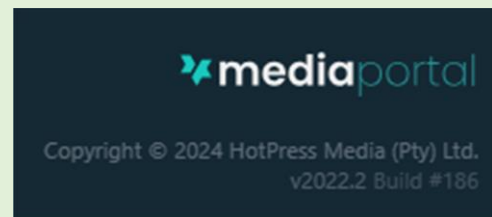
<https://doi.org/10.17159/sajs.2020/6419>

Source: Samantha Choles : [sam@frogcomm.co.za](mailto:sam@frogcomm.co.za)



Knysna Home-Credit XLAM

[MediaPortal](#)



#### TheWoodApp

The WoodApp is available to anyone with internet access and inspires and supports local developers, designers, contractors and DIYers to use wood more extensively. It offers relevant, accessible, and practical information on the use of timber in construction in South Africa by guiding designers in local standards, materials and best practices.

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## AI may hold a key to the preservation of the Amazon rainforest.

By Elliott Smith

An animal skitters through the heavy underbrush of the Colombian forest in the dark of night. Hidden deep in the brush is a camera trap that quickly snaps a picture. An AI tool called MegaDetector identifies and classifies the results, streamlining a process that used to take days into minutes. The image is then sent to wildlife experts for review.

Could this picture of genus *Dasyprocta*, a rodent-like creature better known as an agouti, help solve the puzzle of deforestation that has plagued the Amazon for years?

The Amazon is the world's largest rainforest, in an area so vast it encompasses nine countries, including Colombia and Brazil. According to NASA's Earth Observatory, it covers around 2.3 million square miles, or 6 million square kilometres of land. The Amazon's importance to the overall health of the planet, by absorbing carbon dioxide, helping regulate weather patterns and providing a home for flora and fauna, can't be understated.

Yet, deforestation remains an urgent problem. According to research by Amazon Conservation, nearly 2 million hectares (almost 5 million acres) of the Amazon were subject to deforestation in 2022, a 21 percent increase from the year before, as land is cleared for farming, cattle, or illegal mining operations. In Colombia, almost 1 million hectares of forest were lost in 2022, primarily in northwest areas like Caqueta. If deforestation remains unchecked, it could permanently skew the planet's ecosystem, according to international environmental experts.



Dasyprocta

So how does anyone tackle a problem so large and complex as trying to reverse deforestation on a major scale? Enter AI. Thanks to the power of data, machine learning, cloud technology, data science and applied analytics, experts are developing innovative, collaborative programs that will make recognizing deforestation patterns easier and provide tools for policymakers to use in creating action plans that could stop deforestation in its tracks.

"We need to be using technology and innovation to think outside of the box to face the problems that we have," said Diego Ochoa, director of external affairs at the Alexander von Humboldt Institute in Bogotá, Colombia. "We have powerful tools at hand to promote change in society."

Ochoa and his team at Humboldt have joined forces with several other organizations in Colombia, including the CinfonIA Research Centre at Universidad de los Andes, Instituto Sinchi and Microsoft AI for Good Lab to create Project Guacamaya, which uses best-in-class AI models to monitor deforestation and protect the biodiversity of the ecosystem. The algorithms developed allow information to be developed in a tenth of the time compared to manual analysis.

Project Guacamaya (MACAW in English) uses a mix of new AI models for satellite analysis, and modified AI models from existing projects within Microsoft for camera trap analysis and bioacoustics. The databases are stored in the cloud and the group is using the virtual machines and computational power of Microsoft Azure to design and train the models.

"If you think about one of the areas in the world that we need to save, it's the Amazon," said Juan Lavista Ferres, Vice President and Chief Data Scientist at Microsoft's AI for Good Lab. "This project is not going to solve all the problems the Amazon has, but it is going to solve one I think is fundamental: You can't solve a problem if you can't measure it. By doing this, we can actually start measuring the problem."



Source:

<https://news.microsoft.com/source/latam/features/ai/amazon-ai-rainforest-deforestation/>



## South African Weather Service commemorates World Meteorological Day

The South African Weather Service (SAWS) joined the rest of the world in commemorating the World Meteorological Day (WMD) on 23<sup>rd</sup> of March 2024. On this day in 1950, the United Nations (UN) Convention establishing the World Meteorological Organization (WMO) came into force.

The WMO is a specialized agency of the UN for meteorology (weather and climate), operational hydrology and related geophysical sciences. Headquartered in Geneva, Switzerland, it has a membership of 193 countries and territories, including South Africa.

It is at the frontline of climate action as a leading UN agency, providing authoritative data and knowledge on weather, climate and water, informing adaptation measures through initiatives such as "Early Warnings for All", and contributing to mitigation efforts through initiatives such as the Global Greenhouse Gas Watch.

The theme for WMD 2024 is **"At the Frontline of Climate Action"**. It links with WMO's Sustainable Development Goal 13 to "take urgent action to combat climate change and its impacts."

Meteorological work is of huge societal importance towards reducing hunger and poverty; improving health and well-being; ensuring clean water and affordable and clean energy. life below the water and life on land; and making our cities and communities more resilient to climate change.

Weather and climate predictions help boost food production and by integrating epidemiology and climate information, helps us to understand and manage diseases sensitive to climate. Furthermore, early warning systems help to reduce poverty by giving people a chance to prepare for and limit the impact of extreme weather.

According to WMO, every year since the 1980s has been warmer than the previous year. The year 2023 was the hottest on record, with global average temperatures at approximately 1,45°C above the 1850-1900 average.

This is largely due to a combination of human-induced climate change (such as excessive greenhouse gases being released in the atmosphere) as well as periods of El Niño (warming of the Pacific Ocean starting at the Peru coast and which is normally associated with drought and less rainfall in Africa). While El Niño occurs naturally, it plays a big role in contributing to the warming of the planet.

With rising temperatures comes extreme weather events such as heat waves, floods, droughts, wildfires and rapidly intensifying tropical cyclones, record high ocean heat and acidification of the oceans, affecting food sources on land and in the oceans. These conditions are being experienced in South Africa, threatening people's lives and livelihoods.

The demand for weather, climate and water forecast information has never been higher and is expected to increase in the coming years, with the Intergovernmental Panel on Climate Change declaring that it is "now or never" to take drastic climate action.

According to SAWS climate scientists, studies have observed an increase in minimum and maximum temperatures in South Africa. This has come with threats to lives and livelihoods in the country. In January 2022, there were reports of heatstroke-related deaths of seven farmworkers in the Northern Cape following a heatwave, with temperatures reaching 41 Degrees Celsius over a wide area.

To support the quest for climate action, the power of super computers, satellite and remote sensing technology as well as smart mobile devices and artificial intelligence is harnessed by the WMO community as the demand for weather, climate and water information is expected to continue to grow in the coming years.

While the state of the global climate is currently a reason for concern, the global meteorological community has not despaired as several measures that have been implemented over the years are bearing fruit.





These include the Convention on the Protection of the Ozone layer and its phasing out of substances that deplete the ozone layer; the rapid uptake the world over of renewable energy to replace fossil fuels that add to global warming; several opportunities to reduce emissions in cities and other measures as well as measures relating to the Dubai Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) during its 28th Conference of the Parties which will transition away from fossil fuels and triple renewable energy and climate funds for the most vulnerable.

The SAWS will continue to support the goals of the WMO to be at the frontline of climate action, thereby investing in the climate future of our children and theirs to come. By investing in state-of-the art equipment and participating in WMO initiatives such as “Early Warnings for All”, we want to bring the message to each South African citizen. For World Meteorological Day 2024 we have also partnered with the WMO, UNDP and the SABC to emphasise the reality of climate change and global warming, and the expected consequences, should action not be taken now.

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## Seven things you didn't know have their roots in wood

“Biotechnology and innovation are helping the forest product sector to use sustainably farmed trees in ways we never imagined possible,” says Jane Molony, executive director of the Paper Manufacturers Association of South Africa (PAMSA).

Wood is made up of cellulose, hemicellulose, lignin and an array of waxes, resins, and sugars. The properties of these elements make them suitable ingredients in functional bio-products, not just in paper, cardboard, tissue, or sawn timber.

- 1. Cosmetics** – In cosmetics, the water-absorption capacity of cellulose enhances product texture, providing a smooth and creamy feel and thus a better application experience for the consumer. Cellulose can also be used as a film former in nail polish allowing for thin layer application, or an anti-caking agent for cosmetic foundations.
- 2. Textiles** – Viscose, rayon and lyocell are three textiles that are made from a specialised form of cellulose. Also known as dissolving wood pulp, this purified form of cellulose is suitable for chemical conversion into a range of products – it is spun into textile fibres for use in fashion and decorating textiles, cast into a film or regenerated into a sponge.
- 3. Vitamins and pharmaceuticals** – Don't let the name scare you but carboxymethyl cellulose or microcrystalline cellulose (MCC) is a fine, food-safe and versatile powder that is a proven filler and stabiliser in capsules and tablets, helping to bind active medicinal ingredients into a palatable form.
- 4. Animal feed** – Lignin, the “glue” of the natural world, is often removed from the wood during the paper manufacturing process and recovered from spent pulping liquors. A great example of the bioeconomy, lignin is multifunctional and finds application in the agriculture sector. It binds the nutritive ingredients and additives in the production of compound animal feeds.

Sappi Southern Africa, a PAMSA member, recently achieved GMP+ Feed Safety Assurance (FSA) 2020 certification for Pelletin, one of its lignin-based products used as an additive in animal feed manufacturing.

5. **Dust suppressants** – Lignosulphonates are used in mining and road maintenance as a dust suppressant by binding the road surface particles together. Once sprayed onto the road, water evaporates from the lignosulphonate, and as it dries, the dust particles are trapped by the high-viscosity, naturally sticky material.
6. **Plasticiser for concrete** – Lignosulphonates is common admixtures for concrete that acts as a water-reducer or plasticisers to improve the flow of concrete, slow down the setting time and reduce the amount of mixing water required.
7. **Bio- oils and fertilisers** – A potential substitute for diesel, bio-oils are obtained by heating wood waste in an oxygen-free environment, in a process known as pyrolysis. The solid product generated (bio-char) can be used as an enriched growing medium for seedlings or converted into high-grade activated carbon.

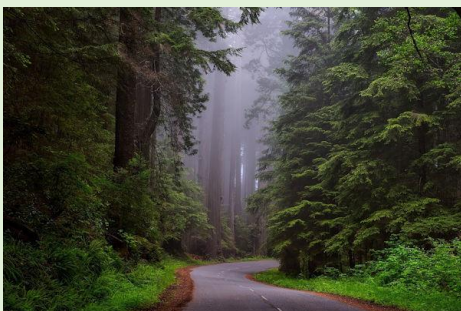
“Anything made from plastic or other fossil-fuel derived materials can be made from wood. By extracting more value from a tree, less goes to waste,” Molony says. “This opens our sector up to a world of innovation, and exciting career opportunities for young engineers.”

“Two key advantages that commercially farmed trees bring are their renewability and their carbon storage,” explains Molony.

Trees in plantations are essentially crops that are planted and replanted in rotations, with only about 9% of the total tree count being harvested in any given year. “This means that there are always trees growing, at different stages of maturity, and these trees are all absorbing carbon dioxide (CO<sub>2</sub>) and storing the carbon,” she says.

With trees capturing more carbon from the atmosphere than any other biome, they offer a means to mitigate the impact of climate change.

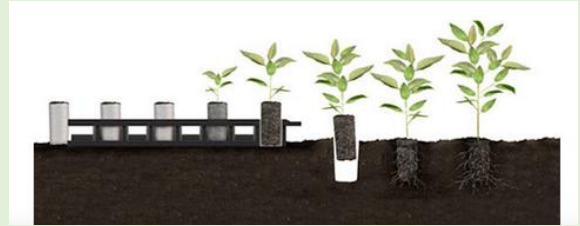
Source: [PAMSA \(https://forestry.co.za/\)](https://forestry.co.za/)



## Ellepot gains momentum in the South

### African forestry market

<https://forestry.co.za/ellepot-gains-momentum-in-the-south-african-forestry-market/>



Ellepot South Africa has been encouraged by the growth in the use of Ellepots in the South African forestry market year on year. It is the system of choice for most foresters when ordering plants from their nursery supplier. “We appreciate the support shown by foresters when choosing the Ellepot system for their new plantings”, says Ellepot South Africa director, Shaun Biggs.

What is driving the change to Ellepots? There are several benefits that foresters have highlighted.

#### Root mass and architecture

Ellepots have been grown in air pruning trays, that increase the root mass of the plant and improve its root architecture, as seen in the picture below. There is no longer the risk of planting root bound plants with the associated challenges that a poor root system brings. The better-quality root system leads to improved survival and uniformity in the compartment.

#### Plant inspection

The importance of root mass, health and architecture is widely recognised by foresters. When a batch of plants is received from the nursery, a quick inspection is typically done on the height of the plants, hardiness, and plant health. A forester may extract a few plants, but with Ellepots it is easy to evaluate the root quality as the root structure is visible. Key traits to look for is how much root mass is visible, are the actively growing white roots visible and are air pruned root tips evident? The number of air pruned root tips is a key factor in how well the plant establishes itself. Each root tip will grow radially out from the Ellepot and forage for soil moisture and nutrients. In a standard plastic tray, root tips will only be found at the base of the root plug, but with Ellepots they should be evident down the full profile of the plug. Being able to easily inspect and analyse the root system is a key benefit highlighted by foresters.

**DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT**

**NO. 4496 : 13 March 2024**

National Forest Act, 1988 (Act 84 of 1998)

***The Publication of the Annual List of All Tree Species which are protected under section 12 of the NFA (Act 84 of 1998)***

The Minister of Forestry Fisheries and the Environment (DFFE), Ms. Barbara Creecy declared protected trees in terms of section 12.

No person may :

- a. Cut, disturb, damage or destroy any protected tree; or
- b. Possess, collect, remove , transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree, or any forest product derived from a protected tree, Except
  - (i) Under license granted by the Minister; or
  - (ii) In terms of an exemption from the provisions of this subsection published by the Minister in the Gazette on the advice of the Council;

There is a long list of protected species ranging from *Adansonia digitata* (baobab) to *Widdringtonia schwarzii* (Willowmore cedar) and many others occurring in various biomes all over South Africa.



*Widdringtonia schwarzii* growing in a deep kloof in the Kouga Mountains (B.du Preez)

The complete list is available on the DFFE website : <https://www.dffe.gov.za> or the Government portal

## Finding biodiversity in timber plantations



Sappi Forests Environmental Manager Hlengiwe Ndlovu (left) leads the way across a grassland conservation area at the top of the Karkloof mountains.

Finding a balance between wood fibre production while conserving biodiversity and minimising environmental impacts is the big challenge facing the forestry industry all over the world. In South Africa it has a particular significance because almost all timber production comes from planted forests established in the wetter grassland areas located along the escarpment and eastern coastal plains.

These plantations, which occupy some 1% of South Africa's land area, play a vital role in providing the primary raw material for a wide range of products from paper and packaging to structural timber, veneers, boards, fabric and charcoal, to name but a few. The forestry and forest products industry generates 10.4% of South Africa's agricultural GDP and 4.5% of manufacturing GDP, creating 105 600 direct jobs and 43 500 indirect jobs in the process. Crucially, these plantations have made it possible to protect the natural forests in South Africa from over-logging by providing the wood fibre needs of the growing population. Many of the plantations in this country were established by government specifically for this purpose.

But the loss of biodiversity which underpins life on earth and the ecosystem services upon which we depend, is a massive red flag for every country in the world, South Africa included. As populations increase more land is transformed from its natural state, and inevitably, the biodiversity supported by those natural systems is negatively impacted.

Find and read the whole article at : <https://saforestryonline.co.za/articles/finding-biodiversity-in-timber-plantations/>





*Eucalyptus dunnii* seedlings grown in the Ellepot System

### Ellepot Paper protection

Ellepot paper protects and stabilises the root system during the handling that comes with transplanting forestry plants in the compartment. This is especially the case with mechanised planting, which is increasingly being adopted in forestry. Reducing transplant shock means the plants capture the pit quickly and are better able to withstand adverse weather conditions soon after planting.

### Ease of use

There's no longer a need for extracting plants from inigro inserts or plastic trays. This makes it easier to get plants to the compartment and reduces roadside handling by 2hours/ha. Consolidating the loose inserts is a labour-intensive operation, whether performed by the silviculture team or nursery supplier. Transporting empty trays back to the nursery becomes a hassle-free exercise, with opportunities to improve efficiency, such as palletising empty trays.

The focus on research and improving the system is ongoing according to Biggs "Working with our nursery partners, we are always looking to improve nursery efficiency and the way in which we get plants from the nursery and into the ground".

Foresters looking to benefit from this system can get plants grown in Ellepots from most forestry nurseries in South Africa.

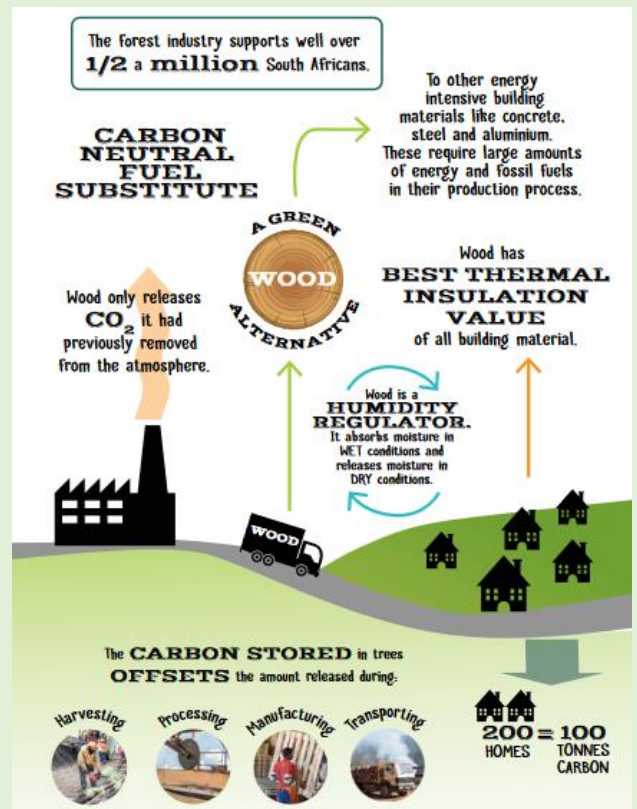
For more information on the Ellepot System, visit [www.ellepot.com](http://www.ellepot.com) or speak to your nursery provider on the various options available.



## FORESTRY EXPLAINED

### A FASCINATING INSIGHT INTO FORESTRY IN SOUTH AFRICA

Offsets by Carbon stored in trees



Did you know? A single mature tree can

# absorb 21 kg's

of carbon dioxide annually.

<https://www.forestrysouthafrica.co.za/wp-content/uploads/2018/11/171293-FSA-Infographic-booklet-Final-low-res.pdf>

## Upcoming Events :TPCP: 7 May 2024



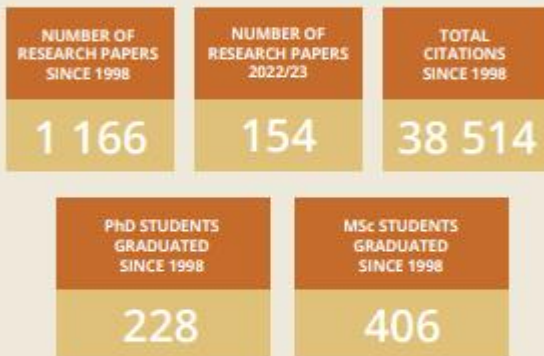
### The 35<sup>th</sup> Annual Meeting of the Tree Protection Co-operative Programme (TPCP) and DSI-NRF Centre of Excellence in Plant Health Biotechnology (CPHB)

The annual meeting of the Tree Protection Co-operative Programme (TPCP) and DSI-NRF Centre of Excellence in Plant Health Biotechnology (CPHB) has become one of the most important meetings relating to forest tree health in South Africa and globally. The 2024 TPCP/CPHB meeting will take place on 7-8 May. This event is open to staff of member companies of the TPCP and other stakeholders in the TPCP and CPHB.

As has been the case in the past, the 35<sup>th</sup> annual meeting of the TPCP will focus on key issues relating to forest tree health in South Africa. Importantly, the meeting will again seek to provide feedback to forest industry and other stakeholders on programmes focused on dealing with threatening pest and disease problems following an integrated pest management approach.

## FABI IN A NUTSHELL

The Forestry and Agricultural Biotechnology Institute (FABI) at the University of Pretoria is a postgraduate training and research institute that was established in 1997, based on a recognition that the future of forestry and agriculture in South Africa will strongly depend on the incorporation of new and emerging technologies into these industries. Major opportunities for these industries have emerged in recent times, from the applications of biotechnology and information sciences to many others.



## WORLDWIDE COLLABORATION



## IUFRO : Forestry and Society towards 2050 : 23-29 June 2024



<https://www.iufro.org/events/congresses/2024/>

## WoodEX for Africa 2024 : 4-6 June 2024



<https://woodexforafrica.com/>

### Coming up later in 2024

**FSA/ SAIF Science Symposium**  
November 2024

**NMU Fire Symposium**  
November 2024  
*More details will follow*

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<b>DFFE representative</b>	Vacant	

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## Birthdays : March and April



### MARCH BIRTHDAYS

02-Mar	KIRKMAN KAREN	20-Mar	DE KOCK LOUIS
04-Mar	BREEDT BRUCE	20-Mar	GREYLING IZETTE
10-Mar	MASONDO SIPHELELE	21-Mar	CHRISTIE STUART
11-Mar	DEREK MTOLO	21-Mar	MAPHALALA KWANELE
12-Mar	LITTLE KEITH	22-Mar	NAIDOO NAVESH
12-Mar	MULLER BARRY	23-Mar	POOLE ROGER
13-Mar	VILANE TEMBA	24-Mar	KANZLER ARNULF
17-Mar	MUIR IVAN	25-Mar	BEPETE FARAI
18-Mar	GELDENHUYS COERT	26-Mar	DE BEER ANTON
19-Mar	KEYSER VOLLEY	30-Mar	CELE JOEL
20-Mar	NEL ANDRE	31-Mar	JACOBS SCHALK



### APRIL BIRTHDAYS

01-Apr	LEO LONG	21-Apr	JOHANN EDELSBACHER
02-Apr	MIKE EDWARDS	22-Apr	POLLA DU PLESSIS
08-Apr	MICHAL BRINK	23-Apr	JACO VAN DER MERWE
08-Apr	LEM LE ROUX	24-Apr	MICHIEL BRITZ
11-Apr	MARK NORRIS-ROGERS	24-Apr	ANDRE DE WET
13-Apr	GEORG VON DEM BUSSCHE	25-Apr	MIKE HUNTER
16-Apr	BRUCE TALBOT	25-Apr	SHARMANE NAIDOO
16-Apr	REVOCATUS MUSHUMBUSI	26-Apr	JAMES VAN ZYL
17-Apr	MAARTEN GROBBELAAR	26-Apr	PHILLIP TSHIDZUMBA
19-Apr	GARY OLSEN	27-Apr	THEUNISSEN RABIE
20-Apr	NIC MOSTERT	28-Apr	MICHELLE SCHRODER
21-Apr	MIKE WINGFIELD		

***Happy Birthday and congratulations to all our members who celebrate(d) their birthdays in March 2024 as well as those members who will celebrate their birthdays in April 2024.***

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## The Southern African Institute of Forestry

### Handbook order form

The Southern African Institute of Forestry publishes three industry specific handbooks.

I would like to order:

**South African Forestry Handbook**

Price: SAIF members: R400

Non members: R500



**Fire Manager's Handbook on Veld and Forest Fires**

Price: SAIF members: R300

Non members: R400



**There's Honey in the Forest**

Price: SAIF members: R100

Non members: R150



International orders must contact the Secretariat for a quote due to currency and postage fluctuations.

A bulk discount of 10% applies on orders of 10 or more copies.  
Price includes VAT.

**An extra R50 per book will be charged if we need to courier the book to you.**

I am  a member  non-member of the SAIF.

<b>Name</b>	
<b>Company</b>	
<b>Postal address</b>	
<b>Contact number</b>	
<b>Email address</b>	

Bank details: Nedbank Branch code: 169745 Account: 1697009913 Account name: SAIF

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