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Southern African Institute of Forestry

Delivering a professional service to forestry

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Editorial

2024 Winding down

We are probably all familiar with the phrase “the time flies” and most of us can confirm that this year really passed quickly. Many of us can look forward to a well-earned break to end of the current year and ease into the new year which is now only a matter of weeks ahead.

As we advance from one year to the next, it also creates an opportunity to look back and look forward. It provides us with a chance to learn from the experience and mistakes of the past, but also to plan ahead for the future.

As far as the SAIF is concerned, we can truly say that we ended 2024 on a high note with the very successful Symposium jointly presented by the SAIF, Forestry South Africa and the ICFR. Although it was a wonderful team effort by everybody involved, three people deserve special mention and recognition namely Dr. Ronald Heath from FSA, Wayne Jones from SAIF and Karin Nagel from ICFR. The organising team did a splendid job and need to be commended for the full, excellent and interesting program. The Speed Talk sessions were particularly effective and timing thereof excellent in the post lunch sessions. The diversity of topics and speakers were really top class.

Bruce Talbot will be back with his regular article in January 2025.

Best wishes for the Festive Season from all of us to all our SAIF members and readers of the Newsletter.



Geo Parkes' Hoogekraal Plantation Southern Cape



Forest Science Symposium : 25-26/11/2024

"The only way our Sector has been able to generate the increase in productivity witnessed over the last decade on a finite forestry footprint is through innovation, research and development. It is that simple. The forestry science symposium is a great opportunity for the best scientific minds from across our Sector to come together and present the cutting-edge research that will shape our Sector going forward. It also offers an opportunity for them to interact with various forestry stakeholders and present potential research opportunities or discuss current knowledge gaps and other threats to our Sector's productivity with the Sector's key decision makers."

These were the wise words from Dr Ronald Heath, Director Research and Protection FSA prior to the Symposium.

When opening the proceedings, Ronald pointed out that the organizers expected 180 participants but that 210 people registered for the symposium. The interest shown by presenters as well as the poster sessions, were overwhelming and very encouraging indeed.



The venue: ANEW Hotel in Hilton provided an excellent venue for the symposium

All sessions and presentations were very relevant and of very high standard. There could unfortunately only be one winner for the best presentation which went to Dr. Jacob Crous from SAPPI with his presentation titled "Progress towards climate change prediction and adaptation in South African plantation forestry" .

The SAIF would also like to congratulate him as a member of the Institute with his excellent presentation.



SAIF National secretary, Intsia Kriel working at the SAIF information desk at the Symposium



The team which made the Symposium such a big success

If we as SAIF, FSA and ICFR needed any confirmation about the need and demand for such a symposium, we certainly received that at the symposium. It brought together, researchers, academics, managers and students who shared what they are currently busy with and also provided a wonderful platform for discussion and networking which will certainly continue into the future.

We can certainly look forward to the next Symposium which is planned for 2026. We also look forward to the planned special Southern Forests edition which will most likely come out during 2025. More information will also be shared during forthcoming editions of the Newsletter.



Gifts from the Universe

By Rob Thompson

As the end of year festive season draws ever closer, thoughts turn to traditional gift exchanges, visits by Santa leaving heaps of alluring goodies under the tree, and delicious feasts with family and friends.

We look forward to this period, nurturing plans of finding that perfect gift for a loved one, and perhaps the odd hopeful wish to receive that special longed-for item, by way of reciprocation. It's forward thinking for good reason, because, after a year such as the one just past, we all could do with a little hope and cheer.

Unless of course, and possibly with a glass of festive cheer in hand, one takes a moment or two to reflect in the reverse direction.

Yes, we've come through a thoroughly taxing year which arguably is best left forgotten, however, there is alternative way to look at the year gone by. We could look at it as a year in which the universe provided us with an array of unprecedented gifts that we didn't even know we needed. In fact, we did not even know they were gifts (most likely because there was no unwrapping called for).

Ok, so some readers may assume that I have reached the point of no return, and the best of the best therapist would simply shrug, say "Ag shame" and move on.

Allow me a chance to explain...

We've had a year of tumultuous fires both in plantations and through infrastructure. Thousands and thousands of hectares destroyed, lives lost, billions in revenue lost opportunity and unprecedented recovery costs. No one can take away that trauma, but, arising therefrom, are the lesser acknowledged, but nevertheless critical, lessons learnt. Nestled in that inconspicuous gift box are the answers to prevention of reoccurrence, guidelines towards better equipment, improved mitigation and control procedures and the highly valuable gift of awareness. The universe has literally spared no expense to provide us with all the appropriate gifts of an improved future in fire prevention and control. All that we are required to do is accept and appreciate them.

Weather patterns and extreme events added additional traumatic texture to our year. Tornadoes, hailstorms

and out of season snow, gale force winds, and drought, all contrived towards the upheaval of 2024 with few realizing that these weather events were actually Santa visits in a different guise. We were left with a plethora of out of season gifts relating to new weather knowledge, substantive assumptions, data, and firsthand observations, with which to better gauge future weather patterns and mitigate risk. Understandably most of us were too caught up in the clean-up operations to truly reflect on the positive offerings received.

In a country plagued with crime and corruption, the forest industry has not been left unscathed by malicious opportunist activities. The sudden arrival of European Union Deforestation Regulation (EUDR) prescriptions demanding procedures to provide a clear overview of the whole supply chain, from timber origin to timber market, initially frustrated many overworked and stressed forestry practitioners. In hindsight, this gift from the universe is arguably one of the best in the gift stash provided. In fact, it is a gift that keeps on giving. Not only do the "enforced" procedures reduce opportunistic wriggle room significantly, but the oversight requirements also have, and will continue to, generate fantastic observation tools providing massively improved visibility over more and more industry supply and production lines.

I mentioned fire related technologies earlier on, however, technological gifts that I have encountered under the universal tree this year are far reaching and numerous. They range from ever improved wattle and gum genetic material availability, information technology advancements, remote sensing, artificial intelligence applications, cross laminated timber advances, and many, many, more.

On the human front we have a new crop of forest practitioner graduates from several training institutions ready to contribute meaningfully to the industry. These are gifts that we, as prospective employees, still need to carefully unwrap figuratively and ensure maximization of potential. Handled incorrectly, the industry will quickly lose the benefit of these gifts so carefully



unwrap figuratively and ensure maximization of potential. Handled incorrectly, the industry will quickly lose the benefit of these gifts so carefully crafted at tertiary training level. The graduates that have been gifted us in the past and have been unwrapped carefully are certainly showing immense promise as was illustrated at the recent highly successful NMU Fire Symposium and the SAIF / FSA Science Symposium.

All of the aforementioned gifts can be viewed collectively as effectively being tactile and “real”. On the less tactile but equally as important and useful social interactive spectrum, the universe has been most generous this year.

We have received gift boxes full of industry resilience. Forestry has proven once again to be an economic force to be reckoned with despite all of the challenges regularly encountered. The base upon which this resilience is built is the industry employee. It is not often at a festive occasion that we are called upon to see ourselves as gifts. In the context of this article please however consider all of yourselves unique and gifted universal operatives.

Alongside the employee resilience gift box lies another which is full of renewed awareness and inter-relatedness (if that is even a word). The industry is rapidly transforming from the less communicative silos of old to a new and welcome inter-dependence and evolving inter-reliance between organisations. Whilst competition is healthy and intrinsic to economic success and growth, the universe has gifted us the clear insight that we cannot all go it alone. The industry requires a certain amount of collaboration, cooperation, and mutual support, in order to overcome the hurdles appearing in front of us and which certainly are not showing any signs of letting up any time soon.

New and possibly beneficial markets have appeared during the year past as have more stable revenue flows. The universe sometimes chooses to recall these gifts from time to time, but we ought to have adequate insight to realise that market related gift provision and recall is highly cyclical. Just as Santa returns every year without fail, so do the highs and lows of the market cycle.

All told therefore, it's been a terrible but rewarding year. We have had to negotiate totally unexpected hurdles every step of the way. Every sidestep executed however, has led to an encounter with an inconspicuous but highly valuable gift on a literally gift strewn landscape. Just as a child knows where to find the most exciting under-tree offering, so too must we learn to find value in the aftermath of challenge.

Have a fantastic and safe festive season and may your tree receive more than expected attention from our annual intercontinental visitor.



Logging-On forestry newsletter

Webpage: <https://www.loggingon.net/>

Logging-On is an independent and unbiased distributor of forestry logging information. Logging-on is not affiliated to any supplier of equipment.

It has the aim of getting new and relevant information to the user as quickly as possible. Logging information is often fragmented, in different formats and time consuming to source and then filter out useful information.

Logging-on aims to short-cut this and places the useful information at the fingertips of the user. The user can then choose to investigate the information in even more detail if required.

Logging-on's second issue of November brings two new **biomass processing** machines from CBI. They have released a new horizontal grinder and a new chipper. **Bell Equipment** produce a machine called a **Skogger**, which is a combination of a skidder and a logger. This flexibility comes at a reasonable capital cost as well. Komatsu Forests takes us from the past to the present with their 40 year history of producing **wheeled harvesters** with an innovative stability concept. Cummins educates us regarding choosing the **correct axle** for our transport trucks. Finally, we look at how Mack Trucks is using the **virtual world** to show potential clients their trucks.



Fire symposium 6-8/11/24: Burning issues on the agenda

Taken from WoodBiz/ SA Forestry : Issue 42

The 14th Fire Management Symposium, held in Karkloof in the KwaZulu-Natal(KZN) Midlands, was well attended by FPA managers, firefighters, land managers, foresters, researchers and trainers, once again proving its worth as the country's premier fire indaba.

Karkloof was an appropriate venue for the event, as it is located in the heart of the midlands forestry belt that has had its share of destructive wildfires over the years. However, the rain and mist that persisted throughout the symposium meant there was no chance that participants would be called out to attend to a fire emergency, so they stayed through the three days networking and engaging with a wide range of issues raised by presenters.

The theme of the symposium was ***Education and Training for Effective Fire Management***. This issue sparked vigorous debate among training service providers and stakeholders who say they are grappling with a complex policy framework that seems to be heaping more layers of bureaucracy and unnecessary admin onto their jobs without improving the quality of training and learning at the end of the day.



Day one presenters.



Day two presenters.

The Cost of Big Fires is Unknown

Keynote speaker Ronald Heath of Forestry South Africa set the scene for the symposium, describing the enormous impact that wildfires have on a country. He said many commentators focus only on the economic impact of fires. Still, there are also human, social and environmental impacts to consider.

There is a general lack of data, and the actual cost of big fires is unknown. Ronald said the net impact on the economy of the 2017/18 fires in the Western Cape was around R1.3 billion for growers and R2.1 billion for worth of roundwood lost and an estimated R2.8 billion in additional downstream processing.

Wildfires are inevitable

Looking to the future, Ronald said more wildfires were on the cards due to several factors:

- Climate change and an increase in extreme weather events.
- Massive increase in urban populations which would expand the urban-rural interface.
- Changes in land ownership and land management.

Tools that are needed to counter the expected increase in wildfires include:

- More accurate climate data at a regional and local level
- Technology advancements
- Increased capacity to measure and model
- Enhanced rapid response capabilities
- Improved collaboration between stakeholders
- Improved education, training and fire awareness

Some of the other topics covered during the Symposium, included Management of Grasslands by Bryan Ypckers from Prairie Project in the USA, Tribal Councils presented by Eric Stoch chairman of the North West Umbrella FPA and Communication and Collaboration presented by Roger Johnston from SAFCA.

Some of the other topics included Aerial Support, Community Engagement and feedback on Forest 21. The message was clear namely that preparation is key, how fire investigations should be approached based on lessons learnt and also that new technology can be used effectively in fire management. The presentations were followed by a Field Day. Read more in Issue 42 of WBA or Forestry in South Africa.



Looking Back : The History of SAFCOL

By Dr. Tienie van Vuuren (Former CEO)

A BRIEF REVIEW OF THE HISTORY OF THE SOUTH AFRICAN FORESTRY CO. LTD (SAFCOL) 1992 – 2002



DR. TIENIE VAN VUUREN
CEO
1993 – 2002

November 2024

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INTRODUCTION

The establishment of the South African Forestry Company Ltd (SAFCOL) introduced a new era in commercial forestry in the RSA. There is no record of this important event and for this reason this is an attempt to briefly record events in the establishment and early history of SAFCOL. Most of the original Board Members and some staff members have passed away. Mr Leendert Dekker, the Chairman of the first board is still active and over 90 years old.

(Some events are recorded as I remember them and I apologize if these are not correct)

In the early 1980's the Forestry Branch of the then Department of Water Affairs and Forestry (DWAF) initiated investigations to detach the commercial forestry operation from the DWAF. The reason was that commercial forestry operations of the State would fit better in with a commercial company owned by the State. This was a historical event after the State owned and operated commercial forests for around 100 years. It was also in line with actions in countries like Chile, Australia, New Zealand and Canada. Senior DWAF employees like Mr. Danie Jacobs and others played an important role in this event. Tragically he passed away at a young age before SAFCOL was established.

DWAF consulted with the Private sector and around 1990 the South African Sawmillers Association (SALMA) undertook a world tour to see what other Countries were doing. Mr. Aat van der Dussen accompanied SALMA on behalf of DWAF and I went along as the SALMA consultant. The outcome of the decade long investigations was that SAFCOL was established as a Public Company with the State as the Sole Shareholder on 01 April 1993. This was done in terms of the Management of State Forests Act 1992 (Act 128 of 1992) of 21 September 1992. The Cabinet appointed the Board of Directors on which the Director General of DWAF (Mr. G.C.D. Classens) served.

BOARD OF DIRECTORS AS AT 31 MARCH 1994



From left to right: R.C. Webb, D.J. Gevisser (Deputy Chairman), D.B. Mackenzie, L.W. Dekker (Chairman), G.C.D. Classens, M.J.C. van Vuuren (Chief Executive), W.J.J. van Graam, D. Kestel. Inset: J.R. Wilson

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General Magnus Malan was the Minister of Water Affairs and Forestry and Dr. Dawie de Villiers the Minister of Public Enterprises during the establishment of SAFCOL. SAFCOL was part of the portfolio of Dr. Dawie de Villiers together with other state-owned enterprises like ESKOM, TRANSNET and others.

The SAFCOL Board then advertised for a CEO end 1992 beginning 1993. I did not apply for the job and was newly appointed as a member of the Top Management at the University of Pretoria. A headhunter contacted me during this period, and I was appointed as the CEO and member of the SAFCOL Board. The initial major task was to transfer the interested approximately 6,000 DWAF employees to SAFCOL. The conditions of employment had to be formulated, job description developed, and salary structures finalized. A very complicated task was to establish a new Pension Fund and Medical Aid Fund for SAFCOL employees. Mr. Dekker and other Board Members played a major role in this process. The next step was to appoint the SAFCOL Top Management. The positions were advertised, and the following appointments were made:

General Manager Finance: Kobus Breed from Deloitte's

General Manager Forestry: Pieter Odendaal from DWAF

General Manager Sawmilling: Hannes Winter from Merensky Group

General Manager Marketing: Andries Swart from SALMA

General Manager Corporate Services: Johan Raath from DWAF.
(He was the Deputy General responsible for Forestry in DWAF.)

General Manager Human Resources: Elijah Lithoko from Private Sector

General Manager Planning and Development: Neville Wessels ex DWAF

Company Secretary: Ernst Odendaal

The SAFCOL forestry assets were divided into five Regions each with a Regional Manager as follows:

Eastern Transvaal	–	Sabie:	Nic Truter
Southern Transvaal	–	Nelspruit:	Vic Luyt
KwaZulu / Natal	–	Eshowe:	Polla Du Plessis
Eastern Cape	–	Humansdorp:	James Lückhoff
Western Cape	–	Knysna:	Georg von Dem Bussche / Kobus Venter

There were five processing plants with Managers:

Timbadola Sawmill:	T. Anderson
Wemmershoek Sawmill:	S. Mostert
Weza Sawmill:	K. Niemand
Blyde Sawmill:	W. van Niekerk
George Sawmill:	J. van der Merwe

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1993 to 2002

A very complicated and important task was then to offer positions to the approximately 6,000 employees of DWAF. These employees had the option to stay with DWAF or accept offers from SAFCOL. In order to enable SAFCOL to become operative on 01 April 2003 DWAF staff were seconded to SAFCOL from 1 April 1993 for a year to finalize employment. This phase was completed in six months and 87% of DWAF employees to whom SAFCOL made offers assumed duty on 01 November 1993.

It is very important to note and salute the courage of these employees to leave the security of Government employees and to join a new company with an insecure future. It was also decided to move SAFCOL out of the DWAF Head Office to new premises in order to contribute to a commercial environment in which previous Government Officials could adapt to Private sector practices.

An old five story building was bought next to the N4 highway in Meyerspark, Pretoria. This building was conservatively refurbished and previous DWAF Head Office staff were moved from DWAF Head Office in Pretoria to the new premises. This required transport sacrifices for some employees. A small but important change was that the morning civil service teatime break and afternoon coffee break in a tearoom were abolished. Refreshments were served by trolley at desks.

In the first month of operation with new bank accounts and uncertainty about cash flows we were not certain that we would be able to pay salaries and wages. Mr. Dekker then negotiated a deal with the Department of Finance to guarantee an amount of R15 million to pay salaries and wages. Fortunately, there was enough cash to do this. We then embarked on a wide range of programmes to train and develop staff to adapt to Commercial Private Sector Practices. Affirmative action guidelines were established and implemented. These actions were done with the help of external consultants.

In the first year of operation SAFCOL showed a net profit before tax of R17.7 million. This was an improvement of some R50 million over the DWAF trading account for the previous year. A maiden dividend of R5.9 million was paid over to the State as a sole shareholder. SAFCOL was successful and remained profitable in the 1993 to 2002 period paying regular dividends, as well as income tax when applicable.

A great debt of gratitude is owed to Mr. Dekker, the SAFCOL Board and all SAFCOL employees for converting within one year, a loss-making Government department to a profitable company. SAFCOL was in terms of size a world class company. It owned approximately 300,000ha of land with some 264,000 trees in normal production. This was some 20% of the total commercial forest area in the RSA. It produced approximately 33% of total sawlogs in the RSA. Environmental Management was of prime importance and all SAFCOL operations obtained Forestry Stewardship Council Certification (FSC). Also important to note that SAFCOL received clean audits from 1993 to 2002 from auditors Deloitte's.

One of the new challenges facing SAFCOL was negotiating with customers like SAPPI, MONDI and a number of other clients, the evergreen supply contracts which were entered into with DWAF many years ago. These contracts made it impossible for SAFCOL to trade freely. It was a very difficult task and required sacrifices by the clients. SAFCOL owe these clients a word of appreciation. Andries Swart played a major role in these negotiations. Regrettably there were some legal battles resulting from these negotiations.

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The History of SAFCOL (continued)

The Government indicated that it was interested in entertaining investments in SAFCOL from the Private sector. SAFCOL initiated contact with overseas timber companies and potential clients in the USA, Canada, Chile, Portugal, Japan, South Korea, India, Australia and New Zealand. SAFCOL initiated exports and exported some 7% of its logs. On 30 September 1994, SAFCOL signed a co-operative alliance with the WEYERHAEUSER Company in the USA. This was one of the largest international timber companies in the world and gave SAFCOL entrance to world markets and the latest know-how and technology. Weyerhaeuser opened an office in Johannesburg, they were interested in investing in SAFCOL and sent Gary Drobnack to man the office. PAHARPUR, an Indian company also later opened an office in Pretoria and Vincent Rohatze manned this office.

In January 1995 the new Government reconstituted the Board and Mr. David Gevisser, previously Deputy Chairman, was appointed the new Chairman. Some of the new Board Members had little experience in or exposure to the timber industry. Minister Stella Sigau was the new Minister of Public Enterprises. She arranged a symposium in Edinburgh, UK to showcase Government organizations like ESKOM, TRANSNET, SAFCOL and others which the Government considered for involving Private investors. The CEOs of these organizations delivered papers on their organizations at this symposium. The labour unions then became involved in SAFCOL matters and the term "privatization" was strongly objected to by the Unions and avoided. Politicians and Government Officials also became increasingly involved in SAFCOL matters and this led to a lot of uncertainty in SAFCOL staff and the Board. It became unclear who was running SAFCOL: The Board or Politicians and Government Officials. Unfortunately, this situation worsened and had a negative effect on SAFCOL morale.

It was not clear what the Government's intentions were with the state-owned enterprises – joint shareholding, or other possibilities. In around 1998 the Government announced some very important decisions regarding SAFCOL:

The forestry land would not be part of the Private sector involvement and would continue to belong to the State. Private sector involvement would be on a 70-year lease basis of the standing trees. Some 40,000ha of forests West of Krynna in the Western Province would not be replanted by SAFCOL and be reserved for the use of previously disadvantaged communities.

These decisions seriously influenced the interest of Private Sector involvement. Nevertheless, I was invited to present a paper at the WORLD WOOD SUMMIT in Chicago 1998 on SAFCOL's investments potential. In 2000 the Government sent a delegation consisting of Government Officials and labour unions overseas to have talks with parties who expressed interest in investing in SAFCOL. The delegation visited organizations in the USA and Portugal. I was instructed to accompany this delegation but as an Advisor only and not to participate in discussions. It is important to note that understandably SAFCOL was never part of any discussions between the Government and potential investors. The Government also appointed overseas consultants from HSBC Bank and another organization to advise on "Privatization." Steinhoff also expressed serious interest in investing in SAFCOL. Nevertheless, SAFCOL expanded and diversified its operations to initiate the following Eco-Tourism and Agro-Forestry activities:

- Lakenvlei Fishing Destination – Mpumalanga South
- Debengeni Waterfalls – Mpumalanga South
- Tokai Forest Lodge – Western Cape
- Avocado Project – Mpumalanga South
- Flower Project – Eastern Cape

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- Fruit Project – Western Cape

A final decision by the Government on Commercialization / Privatization of SAFCOL dragged on from 1995 to 2000/2001. SAFCOL could not make any strategic, structural or management changes without the explicit approval of the Shareholder. The Shareholder was bound to operate in terms of an agreement with labour which required consensus on these matters. This inhibited SAFCOL to operate as a commercial enterprise and was a very frustrating and uncertain period for SAFCOL staff. Some Private sector potential investors regrettably lost interest and WEYERHAEUSER withdrew from negotiations and closed their local office to invest in Australia.

It was also discovered that regrettably a member of SAFCOL Top Management became involved with one of the overseas bidders. He was asked to leave SAFCOL.

In 2001 the Shareholder finally decided to restructure SAFCOL into five separate entities to be commercialized. This action had a very serious effect on especially SAFCOL Head Office staff, which were reduced and allocated to the subsidiaries.

The KZN package was sold to Siyagubeka (22,000ha) SAFCOL retaining 25% share

The Eastern Cape North package to SINGISI (60,000ha) SAFCOL retaining 25% share

On 01 November 2001 the remaining SAFCOL assets were transferred to three subsidiary companies:

- MTO Forestry – Western Cape – MTO
- Amatola Forestry – Eastern Cape – AFC
- Komatiland Forestry – Mpumalanga – KLF

KLF package was by far the biggest and the prime SAFCOL asset.

The Shareholder was in discussions with preferred bidders for MTO and AFC. A successful black empowerment bidder was announced for Komatiland in 2002, and this resulted in threatened legal actions by an overseas bidder. The successful bidder for Komatiland had no experience in forestry and James Luckhoff (Senior SAFCOL Forester Manager), Olaf van der Westhuizen (Senior SAFCOL Financial Manager), and I were seconded to this bidder. I was appointed the Executive Vice Chairman of this consortium. This transaction was, however, cancelled owing to alleged financial benefit involvement by a Senior Department of Public Enterprises Official. KLF was to be re-offered for sale in 2003.

I left the SAFCOL service after almost 10 years, on friendly terms, in September 2002.

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forward together
sonke siya phambili
saam vorentoe

Post-doctoral Fellowship

An individual tree, mechanistic modelling framework for plantation eucalypts

The research project

South Africa has very few long-term, intensively monitored experiments in managed forest environments. Just such an experiment has been implemented as part of the Hans Merensky Chair in Advanced Modelling of Growth and Wood Formation in Eucalypts (EucXylo) at Stellenbosch University. This new experiment, called the IMPACT Open-Air Laboratory (OAL), is located at Somerset West in the Western Cape of South Africa. The experiment focusses on the world's most widely planted hardwoods: the fascinating genus *Eucalyptus*, some species of which are the largest flowering plants in the world! See <https://eucxylo.sun.ac.za/open-air-lab/> for more information. The focus of this new experimental facility and associated research program is the intensive monitoring of growth and ecophysiology of several eucalypt species experiencing varied levels of between-tree competition. A wide range of sensing equipment are or will be installed at the site, including dendrometers, sap flow sensors and environmental sensors such as soil water probes. The experiment also makes extensive use of remote sensing systems. These systems are implemented across all plots in three replications on an 11-ha site.

This post-doctoral fellowship (PDF) will harness the large amount of data generated from this site, as well as other datasets from prior projects in the EucXylo program and other research programs. The overarching objective of the PDF will be to develop a new modelling framework, implemented as open-source software, that can be applied to simulate daily individual tree growth. The model must allow individual tree growth to be simulated in a stand context to take into account tree-tree interactions at the IMPACT OAL and in eucalypt plantations in general.



Adjustment to a range of existing models (see e.g. models like SurEau; Cochard et al. 2021)¹ will provide an excellent starting point for the work, but development of new models is likely to be needed.

DUTIES

This post-doctoral fellowship will involve:

1. Bringing together and modifying existing models, developing new models and integrating models into an overall framework for simulation of growth in individual plantation trees.
2. Developing a fully functional open-source software solution that implements the model/s with a practical interface.
3. Some data gathering and assistance with site visits (with students or technical staff) at the IMPACT OAL.
4. Leading proposal development to bring in additional funds for research activities or travel where possible.
5. Co-supervision of at least one student.
6. Some assistance with under-graduate teaching in the Department of Forest and Wood Science.
7. Publication, as lead author, of at least two peer-reviewed papers reporting findings on the research topic, as well as co-authorship with students also working at IMPACT.

Location

The incumbent will be based full time at Stellenbosch University (SU) in Stellenbosch. SU celebrated its centenary in 2018, is widely acknowledged as one of Africa's premier tertiary education and research institutions (visit www.sun.ac.za for more information). Staff and students at the University enjoy a relaxed and pleasant lifestyle, close to mountains and sea. Attracting students from around the world, and particularly Africa, and with strong international linkages and collaborations, the DFWS prides itself on research excellence with a diverse, friendly culture.

Requirements and qualifications

- A recognized Ph.D. **completed within the last 5 years** in an applicable field, but with demonstrable experience in software development/coding in one or more appropriate development languages.
- A sufficient biological background to be able to

- understand and adapt growth models.
- Up-to-date knowledge in modern scientific data collection, data management, and data/statistical analysis.
- Excellent communication and interpersonal skills to be able to interact effectively with students, scientists, and stakeholders.
- A high level of written and verbal communication skills in English are essential.
- Ability to function in a multicultural and multilingual environment, ability to work well both independently and as part of a team and take initiative.
- A valid South African driver's license.
- At least one high quality paper already published in the scientific literature

RECOMMENDATIONS

Prior experience in working biological time-series data and developing biological models.

APPLICATION PROCEDURE

Application closing date: End of February 2025

Please send by email to Dr. David Drew (drew@sun.ac.za) the following documents:

1. A brief cover letter providing motivation for your application.
2. A brief, referenced essay (max two pages, incl. references) in which you explore work previously done in the area of individual tree modelling in eucalypts or other plantation species.
3. Current, comprehensive CV with full publication list.
4. Copies of doctoral degree certificate and other relevant degree certificates and grades obtained (where applicable).
5. Contact details of at least two professional referees.

Any questions about the position can be addressed to Dr. Drew at the same email address. For questions about visas and international relocation to South Africa please contact : Stellenbosch University International HR-IMMIGRATION@sun.ac.za and copy postdocinfo@sun.ac.za

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Southern Forests : Abstracts



Southern Forests: a Journal of Forest Science is one of the leading forestry journals in the Southern Hemisphere. The journal publishes scientific articles in forest science and management of fast-growing, planted or natural forests in the Southern Hemisphere and the tropics. Papers are also encouraged on related disciplines such as environmental aspects of forestry, social forestry, agroforestry, forest engineering and management as well as the goods and services that are derived from forests as a whole. Articles published by the journal are of value to foresters, resource managers and society at large. The journal particularly encourages contributions from South America, Africa and tropical/subtropical Australasia and Asia. Publication of the journal is supported by the Southern African Institute of Forestry.

Some of the Titles and Abstracts which you will find and can read in Volume 86 , 2024 :

Evidence-based global yield benchmarks in unthinned industrial plantation eucalypts

by Robert Neil Pallett

Abstract

There is increasing global demand for wood and wood products for a growing diversity of applications. Even-aged plantation forests are efficient in providing goods and services from relatively small areas of land. Eucalypt plantations have been an important component of wood supply worldwide and planted area expansion and productivity improvements have

increased significantly over three decades, yet the opportunity may still exist for yield improvements per unit of land area. Increases in eucalypt productivity have resulted largely from an extensive network of field trials and studies published by researchers across the world and particularly in Brazil. This study collates eucalypt yield data primarily from studies of planting density and site factors, both as trials and as plantation sample plots. Studies selected for inclusion are those planted with successful genotypes and under conditions of standard silvicultural practice at the time. The final dataset comprises 309 records of eucalypt mean annual increment (MAI) at rotation age from 61 published sources across 129 locations in 18 countries worldwide. The MAI data are used to derive a benchmark eucalypt yield for high, moderate and low site quality in Köppen–Geiger climate zones across a stand density gradient from 200 to 2 500 trees ha⁻¹. The benchmark provides a comparison for plantation eucalypt growers to gauge their own productivity. A gap between benchmark and yield flags the opportunity for improvement and provides a focus for strategies to improve yield. Gap analysis can help foster co-operation, shared solutions and technology transfer across geographically separated growers sharing similar climatic conditions. Of particular significance is support for small-scale and medium-scale tree farmers who are becoming increasingly important in the supply chain. In places where expansion of a eucalypt plantation area is contemplated, it is envisaged that the yield benchmark will provide input to the cost benefit, risk analysis and sustainability planning considerations that are essential before planting starts.

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Biomass production and nutritional efficiency in short rotation eucalypt clone plantations for energy in north-east Brazil

By Welluma Teixeira Barros et al

Abstract

Selecting adapted hybrids with greater efficiency in the use and return of nutrients is essential to ensure the success of forestry activities. Although topics on the nutritional sustainability of eucalypt biomass harvesting have frequently been discussed, few studies have focused on short rotation eucalypt clonal plantations (aimed at energy production), especially in conditions of nutrient scarcity and water limitations in Brazil.

Therefore, our objective was to evaluate the nutritional efficiency and sustainability (for nitrogen (N), phosphorus (P) and potassium (K)) of six eucalypt clones in short rotation cultivation in the north-east of Brazil, considering different harvesting scenarios and using the *Eucalyptus urophylla* species as a reference, which is traditionally planted in the study region. Direct quantification of the biomass of 21 trees of each clone was carried out at 5 years of age. The clones did not affect the accumulation of total biomass (on average, 199.9 Mg ha⁻¹). The 1296 and 1355 clones provided lower biomass export and greater nutritional efficiency, favouring an increase in the potential number of rotations (PNR) for P and a reduction in the N removal rate (RR). However, the VM58 clone showed higher biomass export and lower PNR. Thus, clones 1296 and 1355 are more favourable, while clone VM58 is less favourable to nutritional sustainability under the studied conditions. Nitrogen and K may cause productivity limitations in future rotations in whole-tree harvesting systems. Adopting more conservationist harvesting systems with removing only the stemwood or stemwood with bark can optimise the potential of clones, minimise the need to add fertilisers and ensure maintenance of the site's productivity.

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Carbon storage in a dry Miombo woodland area in Tanzania

Ezekiel Edward Mwakalukwa, Henrik Meilby & Thorsten Treue

Abstract

A persistent need exists, both politically and academically, for knowledge on carbon storage and sequestration potentials of forest ecosystems and their contributions to the global carbon balance. This study assessed carbon stocks of a 6 065 ha dry Miombo woodland site in Iringa Rural district, Tanzania. The carbon stock for each of the six pools: trees, shrubs, deadwood, herbaceous vegetation (grass and herbs), surface litter and soil were estimated. Assuming a 50% carbon share of biomass, the results showed that the aboveground carbon stocks were: 24.71 Mg C ha⁻¹ for trees; 10.88

Mg C ha⁻¹ for shrubs; 0.54 Mg C ha⁻¹ for deadwood; 0.58 Mg C ha⁻¹ for herbaceous vegetation; and 2.47 Mg C ha⁻¹ for surface litter. Soil carbon was estimated separately for two depth ranges: 0–15 cm and 15–30 cm below the surface. These soil strata contributed 21.24 Mg C ha⁻¹ and 8.22 Mg C ha⁻¹ respectively. The total carbon (C) stock of the six pools was 68.64 Mg C ha⁻¹. Considering the vast area covered by dry Miombo woodlands in Tanzania and in 10 other countries in south-eastern Africa, the carbon stock of these ecosystems is clearly tremendous, underscoring the importance of conserving them.

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Other Titles:

Effect of invasive species on forest composition in tropical dry forest: a case study of invasion by *Gliricidia sepium*

By Priya Kaushik , Pranab Kumar Pati , ML Khan and PK Khare

Identification of main variables in forest management for recovery of endemic species habitat in burned areas of southern Chile

By Roberto Moreno, Ricardo Zamora, Norman Moreno-García, Carlos Esse, Carmen Galán, Juan Ramón Molina

Growth and adaptability of provenances and progenies of *Pinus maximinoi* H.E.Moore in northern Mozambique

By Cremildo Riba Gouveia Dias, Laurina Adriano Guacha , Aires Afonso Mbanze

Evaluating resistance drilling and NIR spectroscopy for quantifying wood quality of young eucalypts grown in Guangxi province in southern China

By Y Cheng , GM Downes , C Johnsson , B Sundberg and RJ Arnold

The use of suitability models and remote sensing to map forest suitability: a systematic review

M. Buthelezi, Romano Trent Lottering, Kabir Yunus Peerbhay, Onesimo Mutanga



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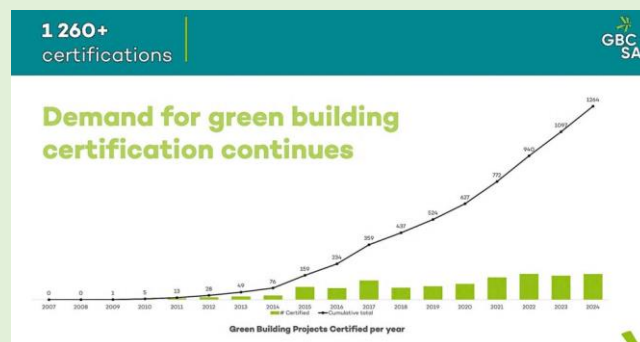
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Questions

Please contact Dr. Justin Erasmus (erasj@sun.ac.za) should you have any questions or simply want to indicate your interest in attending.

Zero+: Net Zero Today, Climate Positive Tomorrow

By Joy Crane (Shortened)



A host of prominent speakers, including former Eskom CEO and author André de Ruyter, venture capitalist Michael Jordaan and human rights and environmental activist Kumi Naidoo, addressed the Green Building Council South Africa's (GBCSA) 17th convention in Cape Town in November.

The three-day convention gathered the top role players in sustainability in the built environment under the banner of *Zero+: Net Zero Today, Climate Positive Tomorrow*.

The GBCSA Convention is an annual gathering of industry experts, innovators, and thought leaders to discuss the built environment, environmental sustainability, and climate change. The convention aims to promote the concept of climate positivity for the built environment and chart a course for the goal of zero carbon emissions by 2050.

Lisa Reynolds, CEO of GBCSA, said the global construction industry and its ongoing operations are responsible for nearly 40% of all carbon emissions. There is an urgent need for climate-positive and sustainable building practices.

"While the built environment poses significant challenges in the climate emergency, it offers substantial opportunities for intervention and positive change", she remarked.

"For South Africa to reach our carbon-reduction targets, we need to have 20 net zero carbon buildings every 24 hours. The more net-positive buildings we retrofit and design, the quicker we will reach our targets. The aim is for everyone to 'make your space matter' for a climate-positive tomorrow".

Delegates could attend three tracks held simultaneously: buildings, investment or cities. Everyone attended the exciting plenary sessions where comedian John Vlismis kept the ball rolling between speakers.



Commenting on the perception that sustainability is expensive, Smit said: "Going green shouldn't be a guessing game. Research shows that the green premium is less than expected and continues to fall, making sustainable choices more accessible and achievable for all".

The 2024 GBCSA Leadership Awards were presented to a deserving group of winners at a gala dinner at the Century City Conference Centre in Cape Town.

Reynolds said, "We all must create a built environment beyond simply meeting targets, aiming to foster a positive, regenerative impact. So much has been achieved on this journey over nearly 20 years, and we must shout to the rooftops about the good work being done".

For More interesting articles related to the Forestry Industry, visit the following websites / online magazines



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Coming up in 2026



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SAVE THE DATE
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 Any questions please email to: organizing.committee@terraenvision.eu

For more information, contact Tiaan Pool at
 E-mail: tiaanp@mandela.ac.za

PMA NEWSLETTER. DEC'24: The Future of A.I. In Pest Management



For more information , visit their website or contact them at :

<http://www.pestmanagementacademy.com/>
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DFFE representative	Vacant	



The following members will be celebrating their birthdays in December



DECEMBER BIRTHDAYS			
02 Dec	FRITZ VON KROSIGK	14 Dec	DACE ROGANS
02 Dec	RONALD HEATH	15 Dec	MAURITS PEROLD
02 Dec	CHRIS CHAPMAN	15 Dec	PHILLIP FISCHER
03 Dec	JOHAN BESTER	16 Dec	GERARD LINDNER
05 Dec	GEOFFREY LYLE	18 Dec	JOSUA LOUW
05 Dec	WESSEL VERMEULEN	20 Dec	WILLIAM DAVIDSON
06 Dec	MCOSELELI JAKAVULA	20 Dec	JOHN LE BRASSEUR
06 Dec	DARYL RAJBAL	20 Dec	MADALEEN ALGERA
08 Dec	DEMISSEW TESHOME	25 Dec	CLIFF DLAMINI
10 Dec	DARRYL HERRON	27 Dec	NONDUMISO ZONDO
10 Dec	PIETER ODENDAAL	29 Dec	CHRISTOPHER KOMAKECH
11 Dec	MURRAY MASON	30 Dec	BRETT HURLEY
11 Dec	PIET SCHOOMBEE	30 Dec	SANELE ZUMA
11 Dec	ULRICH MEYER	30 Dec	LESLEY KAPFUMVUTI



The following members will be celebrating their birthdays in January



JANUARY BIRTHDAYS

02 Jan	PHILIP CRAFTFORD	16 Jan	ERIC DROOMER
03 Jan	JAMES BALLANTYNE	17 Jan	LEE CUNNINGHAM
05 Jan	MIKKA PARAG	18 Jan	DIRK LÄNGIN
06 Jan	SANDISO SOTIYA	18 Jan	JOHAN ERWEE
07 Jan	ED HAYTER	20 Jan	ELIZE ADE
07 Jan	ILSE BOTMAN	21 Jan	CARL SEELE
08 Jan	DUANE ROTHMAN	24 Jan	GAVIN BURNHAMS
08 Jan	WILLEM KOTZE	25 Jan	LUKE VAN VUGT
09 Jan	CRAIG NORRIS	25 Jan	LUKE VAN VUGT
10 Jan	S.B MNGOMEZULU	25 Jan	LOUIS VAN ZYL
11 Jan	JEFF BADENHORST	25 Jan	JOH SCRIBA
11 Jan	PETE ODELL	26 Jan	RICHARD MULLER
12 Jan	DAVE DOBSON	27 Jan	GARY HODGE
13 Jan	P.E VON BUDDENBROCK	30 Jan	CHURCHILL MKWALO
15 Jan	FRANCOIS MALAN	31 Jan	RICHARD LIVERSAGE
16 Jan	GJALT HOOGHMSTRA	31 Jan	JACK SWART

The SAIF would like to wish every member who will be celebrating their birthday in December and January, a very Happy Birthday and congratulations with reaching another milestone





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