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Southern African Institute of Forestry

Delivering a professional service to forestry

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Steven Dovey , KZN Branch

From the President's Desk

Climate Change and Forestry

For many years meteorologists and other scientists have been warning. I came across a National Geographic dated September 2004 which dedicate almost the entire magazine to the title "Global Warming : Bulletins from a Warmer World" The article highlight and name three major signs. Firstly ***GeoSigns*** e.g. retreating glaciers, rising seas and shrinking lakes. Secondly ***EcoSigns*** whether penguins, to alpine flowers are coping with the heat.
The third major sign the article refers to is ***TimeSigns***, which asks the question: what causes climate change and furthermore whether a so-called climate flip can virtually happen overnight.

The question is also posed whether it is human caused or a natural process and can be explained as just Cyclical? Would it be reversible or permanent? Climatologists speculate on many of these questions and not all of them necessarily agree on the cause and the magnitude of the problem.

Whether we agree with the climate change theory/ fact or not, and debate on who is driving the climate change agenda and which motives in mind and who should be blamed for it, probably all of us especially the older generation, will be able to share some experience on how the weather has changed. One plantation manager whom I worked with had the benefit of spending approximately 20 years on one plantation and could make informed observations on changing weather patterns. There has always been climatic cycles characterised by periodic droughts interspersed with floods(wet years) and so-called normal years.

What has been interesting though is that there seems to be more extreme weather events nowadays and the distribution and intensity of rainfall has changed over the years and has become less predictable. He also pointed out that the rainfall figures when only looking at monthly rainfall and total rainfall would not necessarily reflect that.
I asked a forester after the devastating fires of 2017 and 2018 on what has changed in the Tsitsikamma over his career and also thinking back to his childhood days. He said immediately without thinking long, that we never or very seldom get the so-called eight days of persistent but light rain which feeds the water table and the streams simultaneously. Whether this is just an "Eastern Cape" saying or not, I would not know, but my dear old grandmother also referred to the 8 days rain.
I can clearly remember from my childhood days that the South-eastern Cape where I grew up experienced frequent flood events which caused major damage to infrastructure, agriculture and forestry operations.

The Kouga dam formerly known as the Paul Sauer dam often overflowed in the past thanks to heavy rains in its huge catchment area. When last did the dam reach Full supply level of 126 m cubic meters. It even went as low as 3.5% in the recent past and currently stands at 20%. This area was characterised by severe flood events one of which back in 1916 lead to the writing of a book named "Die Wildedruif val" written by a native of the Baviaanskloof , P.H.Nortjé.

Fig 1: A plaque reminding us of those who died in the devastating flood in the Baviaanskloof in 1916

We only read about events of more than 100 years ago in books like these and when stories have been passed on from one generation to another.

It is acknowledged that accurate weather records only date back to approximately 1880 as weather data prior to that date does not cover enough of the planet to get an accurate reading according to NASA.
It is also known that humans have been accurately measuring temperature thanks to the invention of the modern thermometer in the early 1700s.

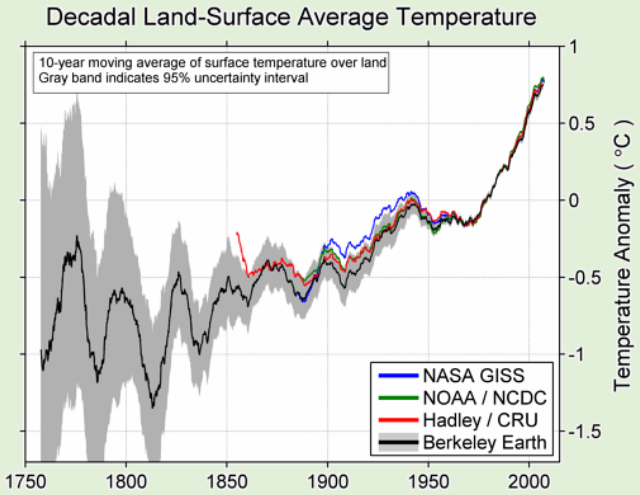

Figure 2: Decadal Land-Surface Average Temperature

Unfortunately, a large percentage of the weather data prior to 1880, has never been placed in digital archives.

Several questions therefore arise e.g. When considering these facts, are we not presumptuous to make sweeping statements on climate change based on a relatively short period with accurate global figures of ±140 years? Would this be the first "global warming" recorded or just another cycle within another cycle? What were the weather conditions like when the Great Fire of 1869 occurred and reportedly burnt almost the entire coastal strip between Riversdale to Uitenhage? What influence did human activity and industrialisation have on the exceptionally hot weather experienced during this period ?
Does this mean that we should not be alarmed by what we currently observe and experience? Not so as each of us have a responsibility to limit and reduce our carbon footprint. The National Geographic of September 2004 speculate about the "Climate crystal ball" and already at that stage indicated that most scientists agreed that human activity in particular the burning of fossil fuels and clearing of forests are regarded as major causes of global warming.

So what should / could we do to mitigate the impact of climate change ?

An interesting video has been doing the rounds lately titled "*How Trees Make Water*" https//youtu.be/oY8ds4BiG1A.

Do have a look and apply your own mind on the contents and application of this in our current situation.

Planting trees including establishing commercial plantations, could therefore be part of the solution to mitigate the impact of climate change. Admittedly some areas will not be suitable to grow trees and should therefore preferably be removed(discontinued) while other very degraded parts of our country with sufficient rainfall and remaining soil, can be afforested to good effect . The long awaited afforestation project totalling ± 60,000ha for the Eastern Cape and Kwazulu Natal as envisaged in the Forestry Masterplan would be a very good start not only to address climate change but also the huge unemployment in the area.

We should also consider the economic and social implications of climate change and "meanwhile back at the ranch" people (All 8 billion of them) still need to make a living and be fed daily.

I am neither a meteorologist nor a climatologist or expert on weather, but to me it makes a lot of sense that planting trees offer part of the solution to this challenge.

We are reminded of the following quote "History is a lantern to the future, which shines to us from the past" (V.O. Klyuchevskiy).

Please refer to other articles in this Newsletter regarding this topic and the meaningful role which forestry can play to address and mitigate climate change.

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The Rob Thompson Column

A critical announcement

The other day I told my wife that she was one in a million… That conversation did not end well…

Had I listened to the news that day, I would have heard the critical announcement that the world population had just surpassed the eight billion mark. Referring to someone as one in a million is therefore officially a tad understated. After all, have you considered just how big the number eight billion really is? Eight thousand million or eight with nine noughts! Enough to bewilder even the most numerically astute amongst us…as well as a certain influential politician!

What is disconcerting about the eight billion announcement is that I can personally distinctly remember the seven-billion-person announcement in Oct 2011, which, all considered, is not all that long ago. Adding further concerning texture to these statistics is the fact that, in the decade in which I was born, (you can research that for yourself), the population was measured at a measly three billion. So, in my lifetime, the population has almost trebled in size, not that I'm directly responsible for that of course…along with my wife we're merely two in eight billion!

In 2011, I was already (rather pessimistically), arguing that the Earth's ecological clock was already set at ten minutes past midnight and any rewind function it may have had in the past, was completely defunct. And yet, the Earth continued to service and support a further billion souls! Does anybody really have any idea what the ecological time is now?

How on earth are we going to accommodate and feed all these people, particularly given that the demographers are predicting that the growth curve is not likely to flatten into the near future? Of course, if you are Elon Musk, you are predicting a population decline, but the jury definitely remains out on that one, as it does regarding the ultimate success of Twitter.

Anyhow, back to the population explosion. Just like any explosion, there is collateral damage and sharp shards of shrapnel associated with the blast. Population growth comes with its own set of shrapnel manifesting in many direct and indirect ways.

Who for instance, has recently been to the Western Cape and tried to drive say from Claremont to Hout Bay? It's best to plan for a two-day trip or alternatively have a sturdy dose of amphetamines handy. You're going to need them after negotiating all that traffic!

Population growth in the Western Cape, alternatively referred to as semigration, is very real and spreading ever inland, as the coastal regions become oversaturated with human presence. Many areas across the country are experiencing similar high population growth, and the impact of this is becoming more and more apparent. A visit to the Kruger National Park demonstrates the now very real need for fencing of conservation areas given a burgeoning Bushbuckridge development literally on the borders of the park.

Lyall Watson wrote the book "The nature of things. The secret life of inanimate objects" in which he explores the energy of objects and their ability to perform the unexplained. Read it if you can. It's a good read and causes one to think about what you see and experience, on a totally new plain. Why the jump from population growth to inanimate objects you ask. Well, based on the premise outlined in the book it could be argued, that the ever-increasing growth of potholes across the countries' road infrastructure for instance, is a direct warning to us, from key objects that we rely on, and which are rapidly losing energy and cohesion, to wake up and change our ways. Clearly, it's not only sentient people that we should be listening to. Objects have a valuable message to give as well. That said, the Eskom power plants must be really angry with us, and they certainly are making their point clear.

My mention of the Kruger National Park reminds me of another population explosion that was reported in the news this month. The spokesperson of San Parks was heard on the radio apologizing for the outbreak of cicadas within the park. Now anyone who has heard a cicada knows just what a racket it can make. Imagine that high pitched sound amplified by millions if not billions? Apparently, the good rains and heat events of recent weeks, has created ideal conditions for the emergence of a cicada population that is almost unprecedented. Not only do they make a noise, but they are attracted to light and bomb people sitting around camp or porch lights. I felt that this anecdote appropriate to this article because it illustrates the attention generally given by people to natural outbreaks in whatever form they manifest. Here is a national park apologizing for a cicada outbreak and offering guidelines to visitors as to how to best deal with it.
Who would have thought?

The outbreak of the COVID 19 virus is another explosion that has gained the attention of people across the globe and still holds them in its rather nasty grasp. All manner of technology has been thrown at it in efforts to control or eradiate it. So much so, that control measures and prevention have become part of everyday life.

Recent rains not only awakened sleeping cicadas, but they also stimulated millions / billions of those minute and irritatingly efficient aerial assault gunships commonly called mosquitoes. With one's exposed ankles and neck the target of multiple successful aerial raids, a pleasant interaction with a cold beverage in hand, is spoilt as one is driven insane by the unsuccessful quest to locate and crush the devil-sent creature. It comes as little comfort to the beverage holder, but recognition needs to be given to the fact that, on a wider scale, the mosquito explosion has gained humankinds attention with all manner of prophylactic and chemical controls in place, and still being developed.

Looking through my window, the grass explosion on the front lawn definitely calls for the attentions of a lawn mower before any resident elephants manage to take refuge there. Again, a plant explosion that is recognized and attended to out of necessity. In forestry circles, population outbreaks of snout beetle, gall wasp, pathogens and the like are recognized, studied, and attended to in short shrift. We recognize a risk, determine a strategy and act appropriately, before it becomes too late to save our valuable timber resource.
My ramblings in this article point towards localized population outbreaks, often of unwanted or inconvenient natural entities, and the attention that they generally attract from humans in order to control or mitigate such.
Ironically, the biggest outbreak that we have ever experienced, that of ourselves, is seemingly invisible to most of us.
We don't even recognize or understand the signs being presented. Broken roads, towns encroaching on preserved natural areas, traffic jams, overstretched towns and cities, these are all clues as to the pressure that we are placing ourselves under. I don't offer any solutions, but I do encourage that readers at least think about the magnitude of the recent eight billion people announcement and contemplate what this might mean to you and your offspring.
Tread lightly and do all possible to not contribute towards pushing that minute hand any further past midnight.

THE CLIMATE CRUNCH

November 3, 2022

More red tape, more taxes, more climate challenges, more opportunities for forestry …

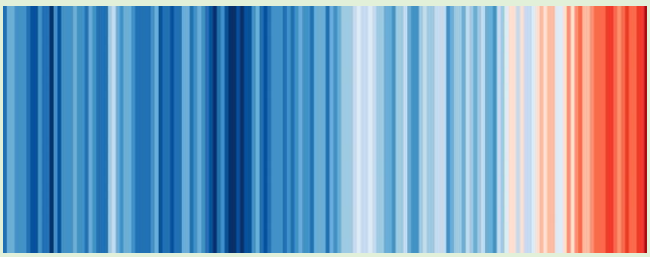


Figure 1

Warming stripes graphic depicting annual mean global temperatures (1850-2018, from World Meteorological Organization data), produced for the World Meteorological Organisation (WMO) provisional State of the Climate report. Image © Wikimedia Commons

"We are already in trouble … climate change will just make it worse." These sobering words from Prof Eugene Cloete, microbiologist, water expert and recently-retired Vice Rector Research & Innovation at Stellenbosch University, set the tone for the opening of the Forestry & Climate Symposium held at the Department of Forest & Wood Science at Stellenbosch University in October.

Prof Cloete said that urbanisation across the world is continuing at an unsustainable rate, outstripping our capacity to provide the essential infrastructure. Pollution and poverty are on the rise. He says the world can support 1.2 billion people – not the 8 billion people we have now.

"We are exceeding the carrying capacity of our planet by 25%," he said.

One of the consequences of this scenario is that the migration of people is accelerating. "It's a natural phenomenon – people move to where there are more available resources," he said.

But this only creates more problems. Borders are closing, nationalism is on the rise, social instability is increasing.

It's an "ecological principle". Increasing competition for resources leads to war.

We have to drastically reduce our consumption to get a shot at surviving, says the Prof. That's what Covid did – it pushed us back into the carrying capacity of our planet, but it's not sustainable.

He says that the ecosystem regulates the carrying capacity of the world. He predicts that there will be a shortage of water going forward, and we will have to re-look at how we manage this precious resource.

We also need to develop clean energy for the future. "Technology alone is not the solution – behaviour change is necessary."

"We are on a non-sustainable path that could lead to disaster and even extinction. This is either our last century – or the century that marks a big change in our behaviour to ensure our future."

Forestry perspective

Executive Director of Forestry South Africa, Mike Peter, provided some context on where the forestry industry stands in relation to climate change.

He said climate adaption at a business level is essential. The climate in regions where we grow trees in South Africa is already changing, and stakeholders are planting different species that are better adapted to the climate reality, he said.

The Carbon Tax has its origin in the non-binding Kyoto protocol of 1997, then in 2013 came the rise of RED and RED+ following the realisation of the impact of deforestation, but RED was not a "silver bullet" that would stop the build-up of emissions in the atmosphere. You can't have a RED+ project in an area where we would have established forests anyway.

Then at COP 15 the then SA President Zuma committed South Africa to reduce emissions by 34% by 2020, and 40% by 2050. Why did he make this commitment? Because he was pro a nuclear build that would have netted him and his cronies millions, said Mike.

Then our government proposes a carbon tax, but they wouldn't open up the market for renewable energy. It took President Cyril Ramaphosa until 2022 to open up the playing field for the generation of renewable energy at scale.

The carbon tax came into effect in 2020 – in the middle of a pandemic! Land-based sectors like forestry and agriculture were granted five years' grace and will have to commence paying the carbon tax in 2025.

Mike said that the forestry sector is a very small emitter of greenhouse gases, and anyway it would cost the government more to collect the tax than the carbon tax revenue would be worth.

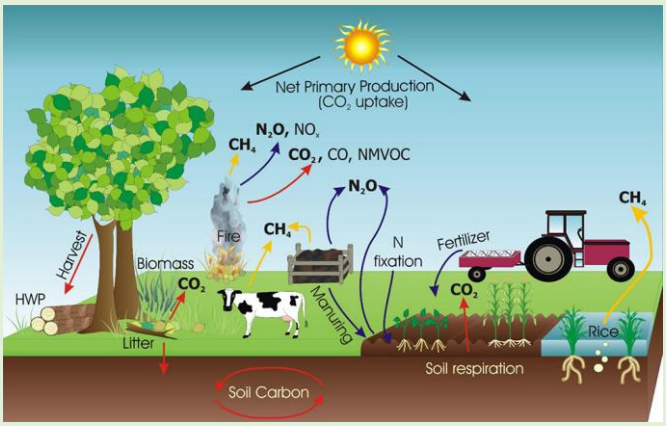
"We are locking up CO^2 in our plantations. We want government to accept that biomass is carbon neutral. We don't want plantations to be regarded as a carbon sink. We are carbon scrubbers," he concluded.

Carbon tax is coming

However forestry companies that are involved in manufacturing are already reporting their emissions and paying carbon taxes. Jacob Crous of Sappi provided some insights into the complexities of carbon accounting and the challenges it brings. This is something that all businesses engaged in forestry work – including growers and contractors – will have to come to terms with after 2025.

SA signed the Paris Agreement (COP15) which committed the country to mandatory reporting of GHG emissions to the United Nations Framework Convention on Climate Change. The relevant legislation governing the reporting of emissions and carbon tax inside South Africa are the Air Quality Act 39 of 2004, and the Carbon Tax Act 15 of 2019.

Forestry companies will have to take into account all emissions and removals, above ground, below ground and in harvested wood products. They will have to calculate forest carbon pools vs carbon flows and the annual change in mass balance.



Agriculture and Forestry Emissions and Removals / Land use / Land use change. Graphic Courtesy of the IPCC 2006 report, Volume 4, Chapter 1.

By way of example, Sappi's Scope 1 GHG emissions in 2021 (cradle to mill gate) excluding biogenic C emissions/removals were made up as follows:-

Transport –	19.8%
Harvesting –	15.1%
Fire (non CO^2) Harvest residue –	24.7%
Non CO^2 residue decomposition –	16.7%
Land use change –	9.8%
Fire (non-CO^2) grassland –	8.1%
Fire protection –	0.2%
Management –	1.5%
Roading	1.9%
Establishment –	1.4%

Some useful pointers from Jacob:-

- Change in carbon stocks is calculated as the difference between the starting stock and ending stock.
- The actual carbon stocks (storage in tree crops) are not taken into consideration - only the change.
- Managed land proxy: all emissions from any management action must be reported (harvest residue decomposition, natural disturbance losses, management of conservation areas) – baseline natural emission from grassland burning is not recognised.
- Natural disturbance losses reduce standing carbon stocks, and add to non-CO^2 emissions.
- Carbon is deemed to be emitted to the atmosphere when trees are harvested.
- Conversion from forest land to grassland (delineation) results in large carbon losses as CO^2 loss also included in land use change (not measured against original natural vegetation).
- Land use change removals normally discounted over 20 years.
- Corporate accounting: obtain Scope 3 emissions/removals from external suppliers (upstream) and products (downstream).
- Adapt management systems to facilitate GHG reporting.
- Standardise accounting across the industry.

According to Jacob, the 'rule of thumb' is that around 90% of the carbon stored in wood as it enters the mill gate is the positive carbon balance after taking into account the emissions generated through the planting, tending, harvesting and transporting of the logs to the mill. This puts forestry squarely on the front foot in the climate debate and creates a world of opportunities going forward.

However the calculation for processed products like packaging, fabrics or bio-plastics gets a lot more complicated.

Value of woody biomass

Johann Görgens, Professor in Chemical Engineering at SU, said that woody biomass will become way more valuable going forward. This creates a new paradigm for growth, global investments. He said every plastic produced by fossil fuels can be produced from bio-based sources.

"Sustainable carbon will become a scarce commodity in future."

According to Associate Professor Ben du Toit, preliminary studies show that the carbon content of soils usually increases after commercial afforestation of grasslands. Minimum tillage and below-ground carbon allocation in trees appear to contribute to this result.
Forestry consultant Martin Herbert provided info on how York Timbers are adapting to climate change by breeding trees better suited to a warming climate for their pine plantations along the Mpumalanga escarpment. He said back in the 1970s the climate in the region was significantly cooler, and warmer temperatures are already a reality. "It's a rapidly moving situation, and the temperature change is evident throughout the seasons."
He said when it became evident that *Pinus patula* wasn't thriving, York started exploring different pine species and hybrids that would be better suited to the changing climatic conditions.
In 1975, MAT on the escarpment was 16.82^0 C. In 2020 it was 18.08^0 C. In 2050 it is projected to be in the region of 19.36^0 C.
In order to be prepared for the changing climate, he said tree breeders need to know 15 or 20 years in advance what the climate will be doing. "It's not just temperature – it's a whole spectrum of climatic conditions," he said.

Ecological networks

Rene Gaigher of the Mondi Ecological Networks Programme provided useful insights into the benefits of incorporating ecological networks into plantations. She said these networks of unplanted, natural conservation areas should link areas of high biodiversity such as wetlands, grasslands and natural forest across the landscape.
She said a mosaic of ecological networks are essential to develop resilient ecosystems and are an effective mitigation measure against climate change. These networks allow species to move and are critical for their survival.
The key principle is to conserve large amounts of high-quality habitat that is functionally connected across the landscape.
Also of importance – create artificial ponds or dams (they support 75% of aquatic beetle, bug and dragonfly species found in natural ponds). Ponds increase population resilience against drought.
Grazing and fire regimes that mimic natural conditions are best for biodiversity – mosaic burning and grazing patterns are ideal. Invasive alien plant control helps to conserve ecosystem functioning.
Complex areas support significantly higher plant and anthropod diversity (i.e. areas with complex topography, elevation, different vegetation types etc). Narrow unplanted corridors, while not ideal, have value as movement conduits that increase connectivity in the landscape.

Wood buildings vs concrete & steel

According to Brand Wessels, Associate Professor in the Department of Forest & Wood Science at SU, using wood building materials instead of energy intensive bricks, concrete and steel, can make a massive contribution to a reduction of carbon emissions. This creates a great opportunity for the forestry industry to collaborate with stakeholders to promote the construction of wooden buildings and provide the raw material resources.
Buildings are currently responsible for the biggest slice of energy-related carbon emissions at 39%. By comparison industry is responsible for 31% and transport 23%.
Considering that demand for saw timber in South Africa is already outstripping the supply, it is critical that plantation resources are maximised in order to support the construction of 'green' buildings.

Carbon 0 – money talks

Prof Guy Midgley, Acting Director of the School fort Climate Studies, provided a different perspective on the science of climate change and forestry.
For the last 450 000 years, the world was a much colder place than it is now, he said. Trees almost become extinct in cold periods, because trees need carbon to grow. In the ice age trees and forests were carbon-starved.
As we gradually increase $C0^2$ we push the planet back to more forests, it becomes more tree-friendly.

There is a lack of research around carbon pools and carbon flows – particularly in Africa, he said. We need to know more about how different African landscapes sequester carbon, how Eucalyptus plantations affect the carbon balance etc.
"We don't have the research – we have not invested," said the Prof.
"We need to get to carbon 0 by the end of the century – it's a very difficult thing to do."

He demonstrated a fascinating climate solutions simulator developed by a group of leading scientists that allows users to explore the impact of key policies on future climate scenarios. The En-Roads Climate Solutions Simulator is freely available on the internet at www.enroads.org.

On our current trajectory the world's average temperature will increase by 3.6^0 C by 2100. That will make the world a much more difficult place to live in … for humans.

If we could stop deforestation completely throughout the world and plant 3 trillion trees, it would only make a miniscule difference to this global warming trajectory, reducing the projected temperature increase by a mere - $.011^0$ C by 2100.
Clearly this alone is not enough to make a significant impact. What is required are major changes in policy and consumption patterns that are unlikely to be made voluntarily.

However if you increase the carbon tax price on the dashboard, there is a big step change in the projected temperature increase. Money obviously talks the loudest!
"Our single most effective tool (to reduce harmful emissions and mitigate climate change) is to make carbon taxes very high," said the Prof.
This would force through the changes required to reduce the projected temperature increase by -2.6^0 C by 2100.

"If we don't succeed we condemn our children to a much worse future."
He said that centralised political and economic power is built around centralised energy production, so regionalising energy production with renewables would break centralised power blocks, raising the possibility that we could create a different, more sustainable, world.

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Can planks and paper packaging help solve the climate crisis?

Paper Manufacturers Association of South Africa

New report shares how farmed trees, wood and fibre can be the root of a sustainable future amid urbanisation and population growth through carbon sequestration and storage, as well as material substitution.

JOHANNESBURG – NOVEMBER 14, 2022 – A new report - *The growing role of forest products in climate change mitigation* - launched at COP27[i] on 14 November, highlights that sustainable forestry operations and forestry policies vary across the globe and suggests that forestry and harvested wood products (HWPs) should not be overlooked as key drivers of a climate-resilient planet and green economic growth.

"Policymakers seem to miss the boat when it comes to the role of the global forestry and forest products sector in climate change mitigation," says explains Jane Molony, executive director of PAMSA.

Forestry critics assert that all types of trees should be kept in the ground, regardless of their type and purpose, and perpetuate the myth that wood production causes deforestation. This is not the case. Many countries subscribe to certified and sustainable forestry practices to ensure that this doesn't happen.

"Without a thriving forestry sector, the climate change goals outlined in the Paris agreement will be tough to meet," says Molony. "Sustainable forest management sits at the root of a climate positive sector, along with the production of harvested wood products, including paper, serving to prolong the duration for which carbon is stored."

The report presents a 3S *Framework of Sequestration, Storage and Substitution*, highlighting the role of HWPs in the carbon cycle and ultimately climate regulation.

Sequestration takes place during photosynthesis. Trees absorb carbon dioxide (CO_2) for growth, storing the carbon and releasing the oxygen. Carbon then accumulates in the form of biomass, deadwood, organic litter and soils.

Storage is maintained when trees are harvested, and wood products become a pool of stored carbon.

With half of the dry weight of timber as carbon, the carbon storage potential in long-life wood products and reductions of emissions from use of wood products is significant.

Substitution occurs when wood-based products replace carbon-intensive materials. To keep the goal of limiting warming to 1.5°C in play, countries need to use more timber in construction, more wood-based fibre in packaging, and more sustainably sourced cellulose in a vast range of products from biofuels to clothing to car parts and even pharmaceuticals. "We should even be printing more paper-based books for society," adds Molony.

Locally, trees are planted, grown and harvested in line with international certification standards and local legislation. Only 6% of the country's total plantation area – 1.2 million hectares – is harvested annually. The same area is replanted with new saplings – often at a ratio of two trees for each one harvested. This means there is a constant supply of carbon-capturing trees for productive purposes for years to come. It also supports employment and economic growth.

"It's the circular nature of forestry where the largest long-term mitigation benefit can be achieved," explains Molony. "By maintaining or increasing forest carbon stocks – trees – through rotational growing, harvesting and planting, we generate a sustained yield of carbon-storing timber and fibre."

Detractors contend that planted forests negatively affect biodiversity and land use. Molony adds that sustainable forest management cannot be adopted in isolation of the protection of ancient and old-growth forests, the restoration of indigenous species and afforestation (tree farming) in suitable areas.

"Borrowing from our peer association in Brazil, we believe that the right trees need to be planted in the right place, at the right scale and for the right purpose," notes Molony, alluding to the four R's promoted by the international forestry sector. carbon sequestration,

"We have and always will need forests – and we need them more than ever before," concludes Molony. "Natural and indigenous forests as well as planted forests or commercial timber plantations serve as a source to fulfil many of humanity's needs and provide countless environmental services, most importantly

"In the long term, a sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit."
Intergovernmental Committee on Climate Change, 2007

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Latest issue: The State of the World's Forests (SOFO) 2022

Forest pathways for green recovery and building inclusive, resilient and sustainable economies

PAPER
MANUFACTURERS ASSOCIATION OF SOUTH AFRICA (PAMSA)

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Our Vision

Achieving sustainable growth, together.

Our Mission

Our mission is to deliver value-adding products and services to the agricultural and related industries and to the communities in which we operate.

For more information, visit their website at:

Agriculture | TWK Agri | Mpumalanga

SAIF 2022 Photo Competition Results

The Council is glad to announce that the photos submitted by members for the annual photo competition were of a very high standard and those who sent their photos are thanked for sharing them with the SAIF. The judges had a difficult task to decide who the winners are. Congratulations to all the winners ! We give you a sneak preview of the winning photograph below and names of the other runners-up

Shimmering sun rays dancing through a pine stand, Lakenvlei, Mpumalanga by Madaleen Algera

Gerrit Marais	Maritzbos Waterfall, Tweefontein Plantation, Mpu
Marius du Plessis	Reflections Mt Home, KZN
Phillip Fischer	A forestry view - Old Kaapsehoop Lookout tower, MPU
Leo Long	Silhouette Pine,Tweefontein Plantation, MPU
Sanele Zuma	Fire…to protect from fire, Lothair, KZN
Phillip Fischer	Escarpment Aloes - Kaapsehoop, MPU
Jolanda Roux	A fly with a taste for something sweet not smelly, KZN
Sandisiwe Jali	Suitable environment (fresh leaf), for an egg laying Gonipterus spp
Coert Geldenhuys	Cut stump of Colophospermum mopane tree, Limpopo
Gerrit Marais	Gum Tree Harvesting, White River, MPU
Madaleen Algera	A moment to reflect, Graskop,MPU
Gerrit Marais	Lane of Gums
Jolanda Roux	Circle of life - Fungal wood rotting completing the cycle of wood,KZN

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BIRTHDAYS: NOVEMBER 2022			
SALE, GIOVANNI	Nov-03	HORRELL, IAN	Nov-15
BAINBRIDGE, WILLIAM	Nov-04	WEBB, RIAAN	Nov-15
LOUBSER, RADIE	Nov-04	COLVELLE, XOLANI	Nov-16
JALI, SANDISIWE	Nov-05	DOVEY, STEVEN	Nov-21
VON BENEKE, DEON	Nov-08	CHIRWA, PAXIE	Nov-28
SNEYD, SEAN	Nov-10	LANE, JAYCE	Nov-29
GEVERS, RALF	Nov-12	LINDE, BARRY	Nov-30
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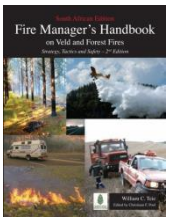

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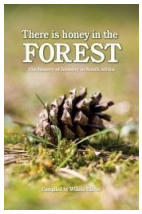

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