

Southern African Institute of Forestry



Delivering a professional service to forestry

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Photograph from the 2020 Calendar (July) taken by Darryl Heron (Gauteng Branch) : "Spring is in The Air"

From the President's desk

The iconic Olive Tree, *Olea europaea*, can it survive?

The iconic olive tree *Olea europaea* meaning "European olive" is one of the oldest cultivated trees in the world. Since antiquity it has symbolised peace and power, used to crown sports winners and Olympic Champions and has inspired poets and writers. Olive oil, is a blessed product which has for thousands of years nourished, healed, protected, stimulated and illuminated. It is estimated that the cultivation of the olive commenced more than 7000 years ago and has been cultivated in the Mediterranean region for at least 5000 years. The olive tree is known as the "tree of life" for its incredible endurance, flourishing in dry, stony soils in environments with mild short winters and long hot summers with periodic droughts and extreme temperatures. Some olive trees across the Mediterranean region are claimed to be between 1000 to 3000 thousand years old. The olive tree played and continues to contribute to the economics across the Mediterranean region and countries such as South America, United States, Australia, South Africa and New Zealand. Olive trees show remarkable resistant to diseases and insects more than most other fruit tree, but are things changing?





Figure 1: An ancient olive tree grove in Puglia, southern Italy

A deadly bacterium, *Xylella fastidiosa*, is spreading across olive tree populations in Europe causing “Olive Quick Decline Syndrome” and resulting in significant economic losses. First detected in olive trees in Puglia, southern Italy, in October 2013, it has been recorded in a number of other locations, including southern France, Spain and northern Portugal. In a published study it was found that the infection could cost Italy over \$5 billion over the next half century. Already, the bacterium has wiped out more than 1 million trees in Italy. Spain could suffer over \$17 billion in losses and Greece will face another \$2 billion in losses. That is assuming the infection continues unabated and replanting is impossible.



Figure 2: An ancient olive tree grove ravaged by *Xylella fastidiosa* in Puglia, Italy

Together, Spain, Italy and Greece account for 95 percent of Europe's olive oil production. *Xylella fastidiosa* is a vector-transmitted bacterial plant pathogen associated with serious diseases in a wide range of plants and is considered to be one of the most dangerous plant pathogens worldwide. It causes Pierce's disease in grapevine, which is a major problem for wine producers in the United States and South America. Numerous species of xylem sap-sucking insects such as spittlebugs are known to be vectors of the bacterium and move it from one plant to the next. *Xylella fastidiosa* also has a broad range of host plants, which include many common cultivated and wild plants.

One of the problems of *X. fastidiosa* is that it is a silent spreader, remaining hidden for various lengths of time. Typically, in olive trees it can remain hidden for a year or more. Once the disease has infected a tree there is no cure and the only way to slow down the spread is to remove the inoculant source. The bacterium invades the vessels that a plant uses to transport water and nutrients, causing it to display symptoms such as scorching and wilting of its foliage, eventually followed by the death of the plant. Based on simulated future spread using climatic-suitability modeling the risks to the industry are significant. The analysis stresses the necessity to strengthen the ongoing research on cultivar resistance traits and application of phytosanitary measures, including vector control and inoculum suppression, by removing host plants. Other countries are taking the potential risk seriously with the Australian agricultural department conducting a risk assessment based on the fact that *Xylella fastidiosa* is a dangerous bacteria that can damage and kill more than 400 different plant species in 95



different plant families.

The number of plants affected by the bacteria is increasing every year. It can also be transmitted with propagation of infected plants. *X. fastidiosa* can infect many horticultural, agricultural, ornamental and Australian species grown overseas. *X. fastidiosa* is the number one pest threat to Australian horticultural and agricultural industries.

This developing story has lessons for the forestry industry to maintain and continue developing integrated pest and disease management strategies in an environment where climate change is a reality. In the words of an Italian olive farmer Giovanni, “The olive tree had an enormous importance for our society because it is a symbol. We thought that the trees could not be touched and are immortal. Now, we are facing a truth that is a natural truth—that nothing is untouchable.”

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Rob Thompson’s Column: Remaining relevant

Can you remember the time, way back then, when you could actually buy a beer and watch live sport on television? Yes...those days when Super Rugby, Tour de France, Comrades marathon et al were still around. Good times!

It was then that a firm handshake, or a hug, would comprise the warm greeting of a colleague, associate, or loved one. It was an era in which being “in with the crowd” was the “in-thing”! Social distancing only occurred when one was un-friended on Facebook and the greeting “Stay Safe” was murmured by sombre special force operatives to unfortunate comrades “army-volunteered” for suicide missions.

Ah yes... The days of parkruns with scores of other participants all jostling for their personal bests, ending with hearty pats on the back in encouragement and congratulations. Those free days when, out in the field, a quick wipe of grimy hands on a pant leg, constituted the full hygiene regimen required before indulging in a packed lunch.

Can you remember those heady days when one actually went to work? In the morning...in order to work...in an office...from 8:00am to 4:30pm... with a lunch break in-between... and colleagues to talk to...and then the drive home at the end of the day. Sometimes, on route home, we would even stop at the shops...that were open...to buy anything that we liked and could afford...even non-essential items that took our fancy at the time.



You'd better sit down before I continue further...

We could even buy barbecued chickens from supermarkets. Literally any supermarket stocked them and I personally saw policemen and politicians buying them at times and nothing happened to them. Oh and the wine!...so many choices from so many cellars, from so many outlets, that simply welcomed you through open doors to exchange your money for their delicious nectar. You could buy as many bottles as you liked. Absolutely no need to smash down the front door to gain access, a criminal record, appearance on the evening news and apocalyptic wrath of the National Police Commissioner. Pure Heaven!

Our children actually went to school way back then. In classrooms, with real teachers and with other learners, actually sitting together in the classroom, so close that they were within reach of the learner on either side. Sometimes it would happen they did touch each other and it was totally ignored. Yes...absolutely no isolation procedure called for. This I saw myself. They had homework, school sport and everything. When learners were eventually finished with school they could go to Varsity. You have to believe me. Real Varsity with a campus, lecture halls and lecturers (also real). You may know some forestry practitioners that attended such places so you can ask them to verify what I am saying. Ask them about the beer and the recollections will come flooding back.

In those days, some smokers were approachable and reasonably friendly people as they puffed away at new, full length, legitimately manufactured cigarettes, obtained via legal public tender, from accredited public vendors, in order to attain their daily legal nicotine fix. Absolutely no licking of zol papers for those tobacco connoisseurs back then. Noticeably the President said absolutely nothing about their

habit then, rather reserving his rare comments to load shedding and Bosasa funding.

When one had the sniffles back then, doctor consults were stress-free affairs. Doctors would actually physically examine one, using their hands (sans gloves... I swear) and instruments, in their consulting rooms, sometimes even going so far as to ask you to say 'aaah' or to cough whilst they sat there, at close range, without breaking a sweat! Amazing days!

Oh who doesn't look back and long for the ease of house maintenance in those good old days. Cleaning the house or office required basic, easy to operate equipment such as brooms, dusters and dustpans. Worksurfaces received a cursory dust down and we were good to go for another week. One could literally wear work pants for two days running before laundering (even push it to three or four if no muddy terrain or a bird dropping on a bench had been encountered). It sounds totally out of this world today but back then some people went so far as to employ other people as maids, au-pairs and gardeners. This then freed them up to go out to work and even visit other people. Just imagine getting into a car and driving to another person's house freely and without a State permit...bizarre!

Personal hygiene was a breeze. A haircut at the barber or salon every month (yes...we had barbers, no, not our wives but real barbers who cut hair for a living- go figure). The normal shower and shave or basic facial makeover (select as per gender) in the morning and repeat fully or partially in the evening. In between, a basic rinse of the hands after nature calls and again...good to go. Deep cleaning was left to the pool maintenance guy and sanitising was a specialist field associated with surgical wards in hospitals.



One gets quite emotional thinking back to the good old days so I should rather stop now. A final recollection though before closing. Literally on any day of the week we could go to dinner and the movies and return home very late at night (say 09:30pm) and the very seldom seen, rotund traffic cop, dozing in his patrol car under the bridge, would hardly bat an eye.

Dammit! There I go and mention the B word! The cause of the demise of the good old days.

Five long, arduous and traumatic months ago when someone ate a bat in Wuhan China. The day the world changed forever.

Since that fateful day, the primary topic on people's minds and in conversation has been Covid-19. It has affected all of us in one way or the other and placed us all under various degrees of discomfort. Many of our previous freedoms have been removed and we are adapting to a new dawn of social distancing, isolation, sanitisation, online communication, health focus, financial stress, partial economic collapse, unemployment, lockdown, bad haircuts, very clean hands, screening, curfews, work from home, statistics, distance learning, trolley wipes, roadblocks, politicians venting, no-smoking, no travel, no barbecue chickens and a very deep, deep longing for a long cold beer, to name but a few of the changes.

The good news is that the adaptation has been swift.

Most people have accepted the new normal and there have been amazing reports of adaptations made which are contributing significantly towards improving essential care and the flattening of the curve. All of us are behest to adapt with our objective being to remain relevant in this new normal. We are not just forestry practitioners.

We can be anything that we want to be and contribute towards levels that only we can restrict, or not. Relevance is the true challenge.

Here's thinking of the sign-maker recently featured on Carte Blanche who adapted his business towards making disposable beds and isolation rooms for Covid patients, the pensioners who spend their days buttering bread for sandwiches and filling food parcels for the destitute, the mechanic who designed a portable ventilator out of a car window-washer motor, the students who created sanitiser from old stale bread, the families in lockdown who have consciously decided to remain positive and the countless others out there who have decided to remain relevant under changed times.

If they can do it, so can we. As for me I think I have the answer...

You'll recognise me on the street when next you see me. I'll be the one wearing the face mask!



The Economy of the Future will Grow on Trees (Part 1)

Planting more trees and using more wood in our daily lives can help us mitigate the effects of climate change, reverse biodiversity loss and reduce pollution - as long as we do it right



The world's leading scientists have given their assessment on the health of the planet, and the verdict is not good. Drawing on more than 1,500 academic papers, last year's UN Global Assessment Report set out the symptoms of a dangerously sick world. It warns that nature is in alarming decline, with human activity having already significantly altered three-quarters of all land areas. Biodiversity is suffering, with more than a million plant and animal species threatened with extinction. The loss of nature's life-support systems puts humanity's own future in jeopardy.

The report follows warnings from the Intergovernmental Panel on Climate Change that we have just a decade to save the world from climate catastrophe. Meanwhile, the world's cities generate 2.01 billion tonnes of solid waste every year, and each of us eats a credit card's worth of plastic every week.

Every passing day brings new calls for action -

not just from environmental NGOs and Extinction Rebellion activists, but from governments, farmers, indigenous communities, multinational companies, finance institutions and many more. So what can we do to bring Earth back to a better state of health? The remedy includes drastically reducing and absorbing carbon emissions, restoring degraded ecosystems, cutting consumption, and shifting to an economy based on renewable resources, or a bioeconomy. And while there may be no miracle cure, there is one particularly efficacious remedy: planting trees.

Trees are the most effective technology we have for removing carbon dioxide from the atmosphere. So-called natural climate solutions - primarily tree planting, but also conservation and improved land management - offer a cost-effective way to deliver more than a third of the carbon dioxide reductions needed between now and 2030 in order to meet the goals of the Paris climate agreement.

But forest ecosystems themselves are only part of the story. Just as important, but far less talked about, is the wider role of forests in supporting a sustainable low-carbon economy. While climate change may be the most pressing argument for shifting away from a fossil-based economy, there are other compelling reasons for increasing our use of renewable and bio-based resources.

Globally, extraction of materials jumped from 27 billion tonnes in 1970 to 92 billion tonnes in 2017, and could reach 190 billion tonnes by 2060 if today's trends continue. The extraction, production and disposal of the materials we use bring a host of environmental and social impacts - from the effects of sand mining on riverbeds and coastal areas, to cement and steel manufacturing processes (each responsible for around 8% of global greenhouse-gas emissions), to the devastating extent of plastic pollution in the ocean.





Clockwise from top left: landfill site, Indonesia; limestone quarry for cement production, UK; pollution from tar sands, Canada; sand mining, Brazil; ocean plastic, Kenya

Substituting wood for fossil fuels or energy-intensive materials such as cement, steel, aluminium, plastics or cotton can bring considerable benefits. A recent review of more than 50 studies found that, for every tonne of carbon in wood products used in place of other materials, overall carbon emissions were reduced by 1.2 tonnes on average. The calculations are complex and the figures vary between different products and technologies, but in general wood products have lower emissions during the production process, and can be recycled and eventually burnt to generate energy at the end of their useful life. Timber products also store carbon throughout their lifetime - which in some cases may be decades or even centuries.



Source: New Generation Plantations

Projected Socio-Economic Impact of the Forestry Exit Strategy: Status Quo and Alternative Scenarios : By Dr. Jaap Steenkamp

Presentation delivered at Knysna Timber Festival on 12 March 2020

Introduction

The second law of thermodynamics states that, in a closed system, the entropy does not decrease. That is, if the system is initially in a low-entropy (ordered) state, its condition will tend to slide spontaneously toward a state of maximum entropy (disorder). (#GOOGLE) SAFCA thank FCC, SAIF, SSA, FSA and the Community for support to break the inertia on the “nothing is happening” and complete disorder in some areas in the S. Cape forestry region.

Why do we have this workshop? (Why are we all here?)....

Because we require some fixing of some things that went wrong.... due to? Management? (absent) Ownership? Negligence? Climate change?....so who owns the problem?

Who are the key stakeholders and how do they perform?

Government: DEFF, SANPARKS, Cape Nature, Forestry Companies, the Public (George and Knysna), Suppliers, Contractors and Community.

- The current situation is an unfortunate given!
- What is the Status Quo?
- Will every entity take up its responsibility? (not admit, take up?)
- Whereto from here? The future scenarios



What is in and what is out? (Land):

- Initial exit area: 44 763ha
- Reversal area: 21 402ha
- Plantation Fire damage 2017: ±16 000ha
- Plantation Fire damage 2018: ±8 000ha
- Total area (all land types) damaged by fires of 2017/18 : ± 150 000ha
- Approximate mean MAI (S. Cape) 12 m³/ha/yr.(conservatively)
- “Idle” land: 21 402ha, opportunity yield (loss): ±256 824 cub.m/yr at R500/m³: ±R128 412 000 per year (gross income).

Salvaged timber:

- **Private Growers** (mainly PG Bison and MTO): Most if not All salvaged
- **DEFF:** NOTHING, but some now (15 months later) in PROGRESS

Re-establishment after fire damage (2017 and 2018 to current

- PG Bison: 2 566ha
- MTO: 7 530ha (Longmore E Cape included)
- DEFF: ???

Exit Implications:

- Loss of Contractors: 14
- Loss of workers: 890
- Other losses of workers: 400

Stakeholders and Bottom lines:

Public, Community, Suppliers, Forestry Pvt Companies, Sawmillers, Conservation bodies: CapeNature and SANParks, Department of Environment, Forestry & Fisheries (DEFF)



Environment : Risk: Climate Change, Fire, Tourism (COVID-19) ? Other Economic Activities

Problem Statement:

- Lack of action (consulting and not implementing. IDC / Heyl report! Already signed by Pres. Mbeki in 2008)
- Lack of clear direction (Community involvement - consulting)
- Lack of capacity (therefore consultants)
- Over promising, under performing (e.g. E. Cape 100000ha(2004)
- Lack of resources
- Opportunity cost

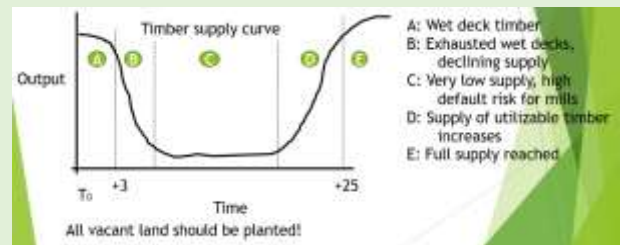
....the losers: country, community, business

Resultant Status Quo

- TU area of 21000ha: when to be resolved?
- Overgrown areas – high cost to clear
- Increasing fire risk! WoF stepped in for now. Appointments up to end of March....what then? (DEFF bailout!)
- Villages and services....can normalize if economic activity returns
- Low employment

Unfolding Scenarios

Not a “normal forest” – no equal annual harvest



OPPORTUNITIES (dependent on Public sector)

- PPP (Public-Private Partnerships.) Willing partners!
- Land leases
- Job creation
- Public land owners to take up responsibility and accountability
- DEFF not to go to the other SOE levels, but enable progress
- Resuscitation of the S Cape local forestry economy
- Reduce burden on tax-payer/ government

THIS WILL PROMOTE THE SOCIAL, ECONOMIC AND ENVIRONMENTAL BOTTOM LINE!

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Birthdays – May 2020



BIRTHDAYS:			
DU PLESSIS L.J.B.	May-02	VON GADOW K.	May-19
PRIEST D.T.	May-04	SLIPPERS B.	May-20
BIJL A.B.	May-05	SCHOOMBEE R.	May-21
OLIVIER A.S.	May-05	SEOKE P.	May-22
SUMMERSGILL C.	May-05	DU TOIT B.	May-24
CAZALET K.R.	May-06	ESLER W.K.	May-24
EVERARD D.A.	May-06	HINZE W.H.F.	May-27
PRETORIUS H.M.	May-07	KIME P.L.	May-27
MAHADEO L.	May-07	NAIDOO T.	May-27
FERREIRA R.C.	May-12	PIENAAR H.	May-28
OBERHOLZER F.	May-13	BUCHAN R.	May-28
DREW D.	May-14	VAN HEERDEN B.	May-28
LE MAITRE D.C.	May-15	BOLD A.J.L.	May-29
GERISCHER G.F.R.	May-16	HATTINGH N.L.	May-30
WESSELS C.B.	May-17	SIMPSON G.M.	May-31
WALTON C.A.	May-18		



The Southern African Institute of Forestry

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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

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