

THE INSTITUTE OF FORESTERS OF AUSTRALIA AND THE AUSTRALIAN FOREST GROWER MAGAZINE **APRIL 2018**

Incorporating ...



Australian Forest Grower News Bulletin

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National President's Report

Bob Gordon, President of the Institute of Foresters of Australia

There is always a lot happening in the world of Forest management.

At the moment we have a Victorian election in the near future where Forest Management may be an issue if some activists manage to subvert a thorough and scientific approach to Forest Management.

There has been a recent "scientific" article which attempts to alarm a generally disinterested public by using philosophically aligned (or lacking in analytical skills) journalists in some media outlets to uncritically promulgate a particular view while ignoring the consensus scientific view. Imagine the outcry if the minority scientific view on global warming was given such prominence on a consistent uncritical basis when there is a clear overwhelming consensus on global warming.

Fortunately, Victorian Forest Scientists such as Mark Poynter and Professor Rod Keenan have been independently and thoroughly providing a considered response but they may not have the same rock star profile that others have. It is always much harder to prove the sky isn't falling than it is to scare people by saying it is.

Unfortunately, Foresters are often in the position of trying to prove the sky isn't falling, and there is never a public and prominent retraction when the sky falling claims are shown not to be true.

In Western Australia the IFA's Committee has been active promoting the thinning of Forest to promote increased water yield, based on good science, but unfortunately not yet implemented by Government. Also, a submission on why a proposed mine was not appropriate in a particularly under represented habitat, again fully researched and documented, was submitted to Government and the mine is not proceeding.

Alex Lindsay, Chair of the Queensland Division prepared a thorough analysis of the unintended consequences of a Queensland Land Clearing law which would have the effect of prohibiting the thinning or harvest of plantations (if they are of native species) and place severe restrictions on silvicultural operations in private native forests, effectively providing a disincentive for properly managing forests.

The Queensland Division, in conjunction with the NSW Division, is organising a Fire Management seminar, following on the very successful seminar run in Mt Gambier by the SA Division.

The NSW Division has been active in promoting a considered debate on proposed administrative changes to the regulation of private Native Forests.

Koalas have been a running issue in NSW, often driven by emotion rather than considered science.

The Tasmanian Division is hosting a group of Foresters from various Pacific Nations, organised by Graham Wilkinson, focusing on Forest Practices, plantation management, management of private forests and certification.

The ACT Division has been active with some field days and also acting as host organiser for the joint IFA/AFG Conference, *Forests for healthy cities, farms and people* in September.

The National office has been busy promoting the importance of the Registered Professional Foresters scheme as part of any new National Forest policy and ensuring there is a minimum level of Skill and experience needed to sign off on any new Plantation proposals.

The National Committees, Fire, Foresters without Borders, Future Foresters Initiative and Valuation are all working away developing new policies. All of this effort is driven by volunteer IFA members who freely give of their time and expertise to promote the wise use of Forests.

It would be great if even more members were prepared to step up and assist, both to ease the load a bit on those currently contributing but also to allow the IFA to be even more active in the public debate. If you feel you are able to contribute then contact your local Divisional Committee or the National Office.



CEO Report

Welcome to the April edition of IFA's The Forester and AFG's Australian Forest Grower. Since the last edition

we've been planning for the combined conference in Canberra on 2-5th September at University House, ANU and completing action items stemming from the strategic planning and board meeting on 22-23rd January 2018 attended by the board, divisional chairs and committee chairs.

The conference is developing well. It will begin with a Welcome to Country and Conference on the evening of Sunday 2 September and will be preceded by the usual AFG 5-day field tour and workshops targeting young foresters and other key topics. Field sessions on Tuesday 4 September will address both farm and urban forest topics, and Canberra icons such as the National Arboretum and inside the Parliamentary Fence. You will most likely have seen our media release about speakers including Senator the Hon Anne Ruston who will open the policy forum on Wednesday 5th September at 9am. Speakers for the policy forum also include National Farmers Federation President Fiona Simson, Australian Forest Products Association Chair Greg McCormack and Landcare CEO Jim Adams. We have also been fortunate to secure Senior Australian Citizen of the Year 2018 Dr Graham Farguhar as the conference dinner guest speaker. Through the development and testing of process-based models of photosynthesis, enabling the prediction of the environmental responses of carbon dioxide exchange between vegetation and the atmosphere, Dr Farguhar has made major contributions

to the science of global environmental change. Other speakers include:

- Prof Kate Auty, ACT Commissioner for Sustainability and the Environment
- Kenneth Er, CEO of National Parks Board which is the lead agency for overseeing Singapore's City in a Garden and conservation in Singapore
- Kathryn Williams, Associate Professor in environmental psychology at University of Melbourne
- Jacki Schirmer, Associate Professor at the University of Canberra
- Professor Rod Keenan and Lyndall Bull, Next Generation Plantations

We have many other speakers to be announced shortly so keep up-to-date by checking our website and reading IFA weekly news bulletins.

The program is continuously being updated as new information comes to hand and is available on the website at: <u>https://www.forestry.org.au/ifa/conference-2018-program</u>

Registrations are also open so please register now to enjoy early bird rates: <u>https://www.forestry.org.au/ifa/</u> register-now

We will also be holding the IFA and AFG AGMs during the conference, dates and times will be advised in due course.

MEMBERSHIP

I would very much like to welcome our new membership officer Kerry Matthew who has replaced Plaxy McCullough. Plaxy has left to either recommence her Masters at ANU or seek a role within an organisation she sees as aligning more closely with her interests and long term career goals. Many thanks to Plaxy for her contribution to IFA over the last year or so, we've appreciated it, and please help Kerry as she settles into the membership officer role and learns the ropes. Kerry will be working part-time on Tuesdays and Thursdays 8.30am – 2.30pm. Kerry will soon be emailing members about the 2018-19 membership renewal process so keep an eye on IFA emails for information about taking advantage of the 10% discount if you renew before 30 June 2018. We'll also be launching a new member promotion, so we'll let you know the details shortly. As reported in the February edition we are simplifying our membership structure to be more inclusive and have converted all Associate Members to Full Members in preparation for the 2018-19 renewal period. We would also like to kindly request that you consider donating to the Forestry Scholarship Fund, Environment Trust Fund or Foresters without Borders when you renew, particularly if you are a life member. Life members may donate by visiting https://www.forestry.org.au/makea-donation. Other members will be able to donate during the renewal process. Donations over \$2 to the Forestry Scholarship Fund and the Environment Trust Fund are tax deductible. The aims of the funds are summarised below:

- Forestry Scholarship Fund the aim of this fund is to provide a sustainable financial base to support graduate and post-graduate students within forestry
- Environment Trust Fund the aim of this fund is sustainable forest management and the processes and practices which translate these principles into outcomes for environmental purposes
- Foresters without Borders the aim of this fund is to assist in the global application of sound forest management which includes, but is not limited to, the management of areas of: land; fire; commercial

and non-commercial production; recreation; natural and cultural values; and water

CODE OF CONDUCT AND STRATEGIC PLAN

For information, the revised IFA Code of Conduct and new Strategic Plan have been uploaded to the website under the About tab and Corporate Documents: <u>https://www.forestry.</u> <u>org.au/about-ifa/corporate-documents</u> When you renew in 2018-19, you will be prompted to acknowledge that you have read and will support the Code of Conduct so please visit the website to read it. It has been based on the UK Institute of Chartered Foresters who kindly gave permission for IFA to tailor it for our purposes.

The Strategic Plan resulted from a workshop attended by the board and divisional chairs in 2017 facilitated by Howard Parry-Husbands of Pollinate. It was endorsed at the recent board, divisional chair and committee chair meeting held on 22-23 January 2018 and has now been uploaded to the website.

DEPARTMENT OF AGRICULTURE AND WATER RESOURCES LEADERSHIP GRANT

Milestones 2 and 3 for the IFA's Department of Agriculture and Water Resources Leadership Grant have been completed and a detailed activity budget, developed in conjunction with the FFI, has now been approved by the Department.

We will advertise opportunities made available through this grant in our weekly news bulletin and direct email blasts so please support this initiative by applying yourself if you are an early career professional to 35 years. Alternatively, if you are in a senior management role, please nominate some of your early career professionals and encourage them to apply.

Let's ensure we get the most from this grant!

We will be supporting a number of early career professionals to attend the IFA-AFG conference in September which will include opportunities for early career professionals to network and participate in a mentoring program being developed by the FFI.

Kevin Harding's AFG President's Report



Its been a very busy two months.

HRH PRINCE CHARLES ROUNDTABLE 8 APRIL

I attended a roundtable meeting with His Royal Highness the Prince of Wales

at Mossman on 8 April. Roundtable attendees included Senator the Hon Anne Ruston Assistant Minister for Agriculture and Queensland Minister for Agricultural Industry Development and Fisheries the Hon Mark Furner MP, Michelle Lauder and Andrew Wilson from DAWR, James Treadwell (President, NZ Institute of Forestry), Prof Rod Keenan (Professor of Forest and Ecosystem Science, University of Melbourne), Mr Richie Ahmat (Chair of the Cape York Land Council), MrAlex Lindsay (QLD IFA Chair), and the two recent recipients of the Prince of Wales Sustainable Forestry Awards, Mr Jesse Mahoney from Australia and Mr Alfred Duval from New Zealand. Head Forester of the Duchy of Cornwall, Geraint Richards, was also in attendance and worked closely to organise the roundtable with Rob DeFegely who expertly chaired the 35-40 minute meeting and discussion. Prince Charles was very interested in and engaged in a very productive discussion.

QUEENSLAND VEGETATION MANAGEMENT ACT

On behalf of AFG Queensland members I have written to the Queensland Minister for Agricultural Industry Development and Fisheries the Hon Mark Furner MP to express our disappointment at the Vegetation Management and Other Legislation Amendment Bill 2018 being presented to the Queensland Parliament without any recommended changes after a 6 week consultation period that delivered Report No. 6, from the 56th Parliament State Development, Natural Resources and Agricultural Industry Development Committee April 2018. Despite some 700 detailed written submissions and over 14,000 submissions in total the government members used their majority to recommend that the draft Bill be debated without any amendments. I asked Minister Furner to exercise what influence he can on his Parliamentary colleagues and Minister Lyneham (Minister for Natural Resources, Mines and Energy and responsible for this Act) to support amendments to this Draft Bill that will address a range of concerns raised in my letter.

Alex Lindsay (Chair of the IFA QLD Division) appeared before the Cairns hearing of the Parliamentary Committee and clearly enunciated some very perverse consequences for native forest plantations if this Bill is passed. Alex will report on these issues elsewhere in this edition. Well done Alex and thanks for highlighting these issues to both IFA and AFG.

AgForce QLD also campaigned long and hard against measures in this Bill and was well represented at the Committee hearings. It is very frustrating that a lot of well supported science based arguments were not considered worthy of recommending amendment to the draft Bill. With this being the first 4-year mandatory term of a QLD government it looks like a long period of continued aggravation and uncertainty ahead for vegetation management in QLD.

Australian Forest Industries Plan

Assistant Secretary, Michelle Lauder and Director, Andrew Wilson are finalising the draft Forest Industries Plan before review by Senator the Hon Anne Ruston, Assistant Minister for Agriculture and Water Resources and discussion at a meeting of State and Territory Forestry Ministers (in early June). The draft will then be finalised and considered by Cabinet with a launch planned for 12 September 2018 subject to final Cabinet approval. Both IFA and AFG made submissions to the Department during this drafting process and look forward to the approval of a forward looking and visionary plan for the industry.

AFPA/NFF New Zealand – Integrating Trees on Farms Study Tour

AFPA has an extensive collection of photos from this New Zealand event on their web-site ... go to <u>http://ausfpa.com.</u> au/gallery/nz-trees-on-farm-integration-tour/.

Kevin Harding travelled to Rotorua for this study tour.

The trip has been reported at https:// www.farmonline.com.au/story/5378020/ trans-tasman-forestry-fact-findingmission-yields-farm-potential/ and includes very positive statements about farm forestry from Chair of AFPA, Greg McCormack and Chair of the NFF (National Farmers Federation), Fiona Simson. AFG will look for further opportunities to engage with AFPA and NFF to highlight some the outstanding examples of integrating trees into farms that our members have been actively pursuing for many years. Our national Tree Farmer of the Year Award winners are a good starting point to highlight success stories and consider what were the important trigger factors that encouraged these members to invest in trees.... And What are the lessons to be learnt and applied now when there is

renewed interest and vocal support for renewed plantation establishment?

NZFFA CONFERENCE – NELSON 6-9 MAY

Kevin Harding is in New Zealand as this edition goes to press attending the NZ Farm Forestry Association annual conference. He is looking forward to meeting up with old friends and further strengthening the ties between AFG and NZFFA. He also hopes to promote the joint IFA/AFG Canberra conference while there and looks forward to a group from across the Tasman joining us in September.

The NZFFA conference is hosted rotationally by their 27 branches and alternates between the North and South Island. This year it is hosted by the Nelson Branch at the top of the South Island and plans are already underway for the 2019 conference to be a larger event promoted as a Small Forest Grower Conference and Expo in Rotorua in May (final dates tbc).

AFG/IFA E-NEWS BULLETIN

Its now well into our second year of this joint IFA and AFG news bulletin. When we first discussed this we envisioned 8-10 pages (maybe up to 15 pages) every two months. However, we have topped 30 pages in most editions which is a very pleasing level of communication with members. Feedback received has generally been positive and we trust that members of both organisations appreciate the timely provision of news and forestry stories of relevance to both groups. 5

Keeping the 'Black Dog' at bay

Dr Kevin Harding

In the 2017 AFG annual magazine produced and circulated earlier this year I included an article on Doug Lang. ABC Landline aired a story on Doug in October 2017 that I found both inspirational and instructive and a story that I think many in rural Australia will relate to and should have awareness of.

For any tree farmer or rural property owner this program and Doug's book (<u>The Nature</u> <u>of Survival</u>) provides a brave and rare insight into the health struggles that many individuals and families have to confront.



Doug's own long battle with his mental health is a story that provides instructive lessons about the importance of wonderfully supportive partners and family and the healing powers of working with nature and planting trees.

Unfortunately Doug has not been well this year and has needed considerable support with his health. The proverbial black dog is quite a mongrel and has been chomping on Doug's heels again. I'm sure you join me is wishing him well and a return to his family, his farm and his trees with all the support of friends, family and medical care that he needs. A timely reminder for all of us to increase our awareness of mental health and to ask the simple but important question of friends and family "R U OK?"

National help lines and websites MENSLINE AUSTRALIA 1300 78 99 78

A telephone and online support, information and referral service, helping men to deal with relationship problems in a practical and effective way.

MINDSPOT CLINIC 1800 61 44 34

An online and telephone clinic providing free assessment and treatment services for Australian adults with anxiety or depression.

SANE AUSTRALIA 1800 18 7263

Information about mental illness, treatments, where to go for support and help.

Queensland - Tree clearing laws

Alex Lindsay - www.alexlindsay.com.au

The purpose of this article is to explain some of the reasons why vegetation management is such an emotive issue in Queensland. The views expressed are my own, based on private research and observations.



Accad, A., Neldner, V.J., Kelley, J.A.R. and Li, J. (2017). Remnant Regional Ecosystem Vegetation in Queensland, Analysis 1997-2015. Queensland Department of Science, Information Technology and Innovation: Brisbane.

WHY DO LANDOWNERS WANT TO CLEAR TREES?

Most of the land in question is used for grazing, and for that purpose, forested land is not economically ideal. Woody vegetation impacts on grass growth and makes it difficult to do routine property management including mustering. Once cleared, the woody vegetation often regrows through suckering, and about two thirds of recent deforestation is actually re-clearing of regrowth. Much of the remaining clearing relates to 'encroachment thickening', where previously open land is becoming progressively woody. The vast bulk of Queensland is still covered by remnant vegetation, as shown on the map to the left.

FREEHOLD PROPERTY RIGHTS AND FAIRNESS

Central to the debate is the issue of freehold property rights. Most of Queensland is not freehold, but leasehold land, where lessees always needed permits to clear vegetation. Many current farming families paid substantial sums to convert the tenure to freehold, in order to able to make decisions about managing their land, without needing the permission of a government official. The vegetation laws expressly change this perceived right, without compensating landowners for the loss.

A related aspect is fairness. The landowners who are most impacted by the laws are those that have previously chosen to retain vegetation, not those who have cleared all of their trees. As time goes on, the landowners without trees are actually rewarded, through higher property prices paid for cleared land.



SHIFTING THE GOAL POSTS

Since the *Vegetation Management Act* (VMA) was introduced in 1999, there have been over 40 amendments made.

The 2009 amendments protected regenerating areas from the landowners who had allowed them to grow!

These amendments have successively increased the impact on landowners. Some key stages were:

• Initially, the VMA was to preserve regional ecosystems (REs) that were endangered (less than 10 per cent of pre-clearing extent).

- In 2004 the purpose was changed to conserve all REs, including those that were "Not of Concern" from a conservation perspective. This change was instigated by the Federal Liberal government so that Australia could meet its Kyoto Protocol Greenhouse Gas targets.
- In 2009 non-remnant regrowth vegetation became regulated if cleared prior to 1990.
- In 2012 regrowth protection was repealed by the new LNP government.

Unsurprisingly, large areas of regrowth were cleared when this was repealed in 2012. It has been argued that the 2009 inclusion of regrowth was the primary cause of the increased clearing rate after 2012. The LNP made other changes which swung the pendulum back the other way (unfortunately in my view).

- In 2015 the ALP were returned to power as a minority government, but they were unable to win the support of the crossbench members to repeal the LNP laws.
- During the 2017 state election campaign the ALP vowed to reinstate the pre-LNP laws. The ALP won a majority, and claim a mandate for reinstating the previous laws.

The new laws go far beyond the 2009 laws

However the new laws go far beyond the 2009 laws, by (among other things) altering what is meant as high value regrowth, to vegetation which has not been cleared for 15 years (rather than since 1990).

This affects over 200 000 hectares, and had not been foreshadowed before the election.

The definition does not exclude tree plantations using



Harvested pine plantations are included in the deforestation total

QLD TREE CLEARING

native species. The new bill also extended protection for regrowth vegetation within 50 metres of additional waterways in the Great Barrier Reef catchment, again including small timber plantations of native species. The restrictions on regrowth extend to Indigenous land, which is worthy of an article in itself.

PROPERTY MAP OF ASSESSABLE VEGETATION

Property Maps of Assessable Vegetation (PMAVs) were introduced by the ALP in 2004 to provide certainly against future changes by 'locking in' boundaries of remnant and non-remnant (Category X) vegetation. Around 12 per cent of Queensland is covered by a PMAV. For landowners with plantations now mapped as regrowth, it is advised to contact DNRME to have the plantations shown on a PMAV. Several environmental groups have signalled their opposition in principle to PMAVs, however the Minister restated the government's support for the system.

WHAT IS THE RATE OF TREE CLEARING?

Without doubt there has been substantial clearing of remnant vegetation, and the government certainly received electoral support to address this. The rate of clearing is hotly debated, depending on whether it includes regrowth and/ or encroachment clearing. Most people are surprised to discover that pine plantations are included in the area reported as deforestation when they are harvested, even though they are replanted the following year.

Graziers would argue the same case for regrowth, which accounts for almost two thirds of the deforested area.

It is entirely foreseeable that there will be an increase in clearing of regrowth younger than 15 years, in the wake of the new laws.

WHAT DOES IT ALL MEAN FOR FORESTRY?

Given the government's intention that public land will no longer be used for wood production, that burden will fall to private land. To that end, it is important to engage with landowners now, to regenerate forests in environmentally sensitive areas, establish plantations if appropriate, or manage native forests silviculturally.

My observation is that successive iterations of the VMA have created a very negative attitude towards trees in the minds of landowners, and this needs to be reversed. An important first step would be for the parliament to recalibrate



The IFA has written to the Queensland Government seeking to have planted forests excluded from the definition of regrowth

its approach to vegetation management. If a landowner has retained regrowth vegetation they should be applauded, supported, and yes, compensated for the foregone potential income.

The community has a legitimate interest in the conservation of the state's vegetation, but landowners have an equally legitimate right to manage their land in an economically sustainable way. I believe that landowners need to feel they have control of their destiny in order to embrace the values that trees can add to their land.

Sydney (tree) population to surge by 5 million

Five million new trees will be planted in Sydney by 2030, making the city a greener and even greater place to live, according to Premier Gladys Berejiklian.

The NSW Government will plant more than 380 000 trees every year until 2030 and give away another 15 000 trees to people who are branching out and building homes in new land release areas in Western Sydney.

It will more than double the tree canopy in Sydney from 16.8 per cent at present to 40 per cent. The trees will all be natives.

The NSW Government is aiming to increase Sydney's tree canopy to 40% by 2030

"With more people putting down roots in our suburbs, this tremendous initiative will improve everyone's quality of life and leave a lasting legacy for generations to come," Ms Berejiklian said.

"Sydney is growing, but growth should not come at a cost to the environment or local amenity."

The announcement is part of the NSW Government's new \$290 million Open Spaces and Greener Sydney package, including \$100 million to secure strategic green space, \$20 million to build more than 200 new or upgraded playgrounds and \$30 million to open up 81 school ovals and playgrounds for public use during school holidays.

The NSW Government is supporting the new 'Five Million Trees' initiative with an initial \$37.5 million in funding over four years.

Minister for Planning and Housing Anthony Roberts said the money would be provided through an annual grants program that will assist tree planting initiatives across Greater Sydney.

"Planting more trees will contribute to the lowering of urban heat in Sydney and improve the environment for pedestrians at street level," Mr Roberts said.

Commissioner of Open Space and Parklands Fiona Morrison said trees provide many benefits. The Commissioner will help co-ordinate where many of the trees are planted, to ensure a strategic approach.

"Tree canopy coverage contributes to an improvement in biodiversity habitats for species as well as providing much-needed shade for our streets and homes.

"Trees also improve visual amenity, landscape and a 'sense of place' in our suburbs," Ms Morrison said. Environment Minister Gabrielle Upton said the benefits from the new trees would reach beyond the communities where they are planted.

"Planting this many trees across Sydney is equivalent to taking about 355 000 cars off the road each year," Ms Upton said.

The 15 000 trees being made available in Western Sydney will be given to people who obtain fast track complying development approval in new land release areas.

The complying development standards, which relate to issues such as building height and landscaping, have been tailored to ensure homes are well designed and protect the privacy and amenity of neighbourhoods.

For more information please visit: www.5milliontrees.nsw.gov.au



Review of EIANZ Environmental Impact Assessment Forum

Ka-Wai Chan (Kristy). Master of Environment student at Fenner School ANU.

IFA provided me the opportunity to attend EIANZ Impact Assessment Forum.

I learnt a lot from experienced **Environmental Assessment Practitioners.** scholars, public servants, not only technical knowledge but also ethics and reflexivity in the environmental assessment process. Highlights of the day are why and how should we bring humanity back in environment assessment through strategic environmental assessment. Gaining "social license to operate" become more and more important to the success of implementation of events and projects. Lacking adequate local community consultation would result in protests and strong resistance to the events and projects. For example, Rally Australia relocated its venue and was required to redo EIA due to a lack of



consultation and engagement with the local community in 2009. Learning from that experience, the organizer would

engage local community in earlier stage of planning process and refine project design to minimize environmental and social impact. Rally Australia is the first organizer-initiated accreditation scheme on EIA compliance in major Motor rally events. It shows the potential to promote strategic environmental assessment in event managements with co-benefits of organization reputation.

Also, I learnt about conceptual knowledge about integrated environmental assessment from Dr. David Hogg. He reminds us the primary purpose of the impact assessment process is to "balance legal, scientific, & humanist approaches" through understanding the emphasis and limitation of each approaches. Flexibility and adaptability should be applied to find the optimal balance in different cases. As very often, EIA practitioners are under time and resources limitation. having deep dive in early and continuous community consultation seems mission impossible. Mr. Warwick Giblin uses real farmer stories to tell us what would happen if EIA is conducted with unethical practices. I also agree that the current legal system is not favorable for affected parties with insufficient knowledge, time, and resources, to fight for their rights. It is very important for EIA practitioners to be the gatekeeper to prevent environmental injustice to the powerless. To better understand human response and their values, social impact assessments should play an equally important role to physical environmental data.

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lote: the office is staffed on a part-time basis only so please allow ime for responses.

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THE INSTITUTE OF FORESTERS OF AUSTRALIA

20 March 2018

Media release

Forests and Sustainable Cities - International Forests Day

21 March has been celebrated worldwide as International Forests Day since it was first declared in 2012 by the United Nations General Assembly. The Day celebrates and raises awareness of the importance of all types of forests.

The theme for 2018 is Forests and Sustainable Cities.

National President of the Institute of Foresters of Australia, Mr Bob Gordon said, 'Trends in urban planning and architecture are bringing more and more trees into our cities causing reduction in energy use by improving the local climate, storing atmospheric carbon, reducing fine particulates in the air and reducing noise pollution.

'Members of the Institute of Foresters of Australia are intimately involved in advising local governments across the country on how to incorporate trees, particularly native species into urban environments.

'We also understand that sustainably managed forests around urban areas can also benefit biodiversity and habitat while providing the fuel and fibre needed in today's society.

'It is often said that the 21st Century is the century of wood with its benefits as a construction material now being realised worldwide and the Institute looks forward to a time when timber buildings dot our skyline with trees growing freely between them,' said Bob

Later this year, the Institute of Foresters of Australia and the Australian Forest Growers are holding a combined conference in Canberra called: **Forests for healthy cities, farms and people.**

'This builds on the UN theme for International Forests Day and from 2-5 September international and local experts will speak about the increasing importance of urban forests in our growing cities, the continuing importance of trees on farms, and the links between healthy tree-scapes and healthy people.

Happy International Forests Day - celebrate by hugging a tree, said Bob.

More information about the conference is at <u>https://forestry.org.au/ifa/about-the-conference</u>

Media contact: Bob Gordon, (02) 6153 3044

The IFA is Australia's professional body for foresters and other forestry professionals

Effective Peer review

The article "Rethinking Traditional Forest Management or Reinventing History"

(Vic Jurskis, The Forester, February 2018) made an incorrect and uninformed claim in relation to the peer review process for the paper "Lightning strikes: rethinking the nexus between Australian Indigenous land management and natural forces" by Brian Egloff published by the IFA in Australian Forestry (Volume 80, Issue 5).

For the record, the paper by Brian Egloff was reviewed by two expert and impartial

reviewers and was revised based on the reviewers' comments. Differing scientific views do not equate to ineffective peer review.

Glen Kile

Chair of the Editorial Board of Australian Forestry

Remember John Kerin?

Remember John Kerin – the Honourable John Charles Kerin, AM, Commonwealth

Minister for Primary Energy? His book, **The way** *I saw it; the way it was* – the making of national agricultural and natural resources management policy was published by APO, Melbourne, in August 2017. Just looking at the contents page tells you the enormous breadth of disciplines and industries he had to try to be across.

Chapter 15 of the 21 chapters is on forestry in case you care to view the actions of government in this primary industry from the perspective of a politician trying to juggle fact, fiction and politics.

Kim Wells, Life Member IFA

Editors note:

Book available online in pdf format. Just click on the cover to the right.

The way I saw it; the way it was The making of national agricultural and natural resource management policy



John C. Kerin APO, Nellin Augulari7

From the forests of Creswick to the bush capital: supporting the professional development of young forester-ecologists

Sarah Dickson-Hoyle and Clare Duck

On March 14, we – Sarah Dickson-Hoyle and Clare Duck – attended the Environment Institute of Australia and New Zealand (EIANZ) Environmental Impact Assessment (EIA) Forum, held at The Australian National University (ANU), Canberra.

Our attendance was supported through the IFA's Young Forestry Leadership Initiative Grant. We attended not only as IFA members and graduates of the University of Melbourne Master of Forest Ecosystem Science but as professional ecologists working for Eco Logical Australia (ELA). Clare had only the day before started her new role as Graduate Ecologist in ELA's Canberra office, so the forum provided an exciting opportunity to dive head in to the new world of EIA and ecological assessments that is the focus of much of ELA's work.

Presenters from a range of backgrounds spoke about environmental policy and practice relating to EIA, much of which is directly relevant to the work we do at ELA. The forum provided a great way of learning more about the most up to date information and approaches to EIA policy and practice. It also enabled us to meet and talk to experienced professionals, many of whom have been based in the ACT or NSW for many years and have a lot of knowledge about the region.

A number of presentations focussed on issues and contexts that neither of us had considered before. For example, Colin Trinder, the Director of Ground Zero Environmental, spoke about applying environmental impact assessment to major events such as the World Rally Championship in Coffs Harbour. Another example was the presentation given by Peter Cowper, from Cubic Defence Australia, who gave an interesting insight into EIA in defence to assess impacts associated with construction of permanent infrastructure and the conduct of military exercises and training.

One of the talks that we both found really interesting was 'Cumberland Plain Woodland: Challenges of Assessing Impacts on a Critically Endangered Ecological Community', given by Chris McEvoy, from Niche Environment and Heritage. While this CEEC is in our Sydney colleagues' patch, much of our work around the ACT and southern tablelands in NSW involves assessing the potential impacts to the CEEC White Box – Yellow Box – Blakely's Red Gum Grassy Woodland, which poses similar challenges of conflicting listings and condition thresholds at a State and Commonwealth level.

A common theme throughout presentations was the need to find a balance between the constantly changing needs and wants of society and responsible environmental management. Several speakers discussed the importance of effective and inclusive consultation with communities about environmental change. It was a very interesting day and we both anticipate that the knowledge we gained will help continue to to inform and benefit the impact assessment work we undertake at ELA.



SOCIAL MEDIA

Social Media use in Australia

Nigel Catchlove - Parsec Communications

The media landscape in Australia has changed enormously over the last 10 years and the line between 'social' and 'media' has all but disappeared.

Before 2006 FaceBook was limited to use by students at a few US Universities. Now there are estimated to be around 2.2 billion - yes you read that right - 2.2 billion, users worldwide and people are increasingly using social media as a source for news.

In 2016 the Reuters Institute for the Study of Journalism conducted a study across 26 countries and found that more than 50 per cent of all web users use social media for news with many saying it is their main source. One of the more interesting findings from the study relates to readers failing to notice the source of a news story. When a story is read online through a news aggregator such as Google or Facebook up to 75 per cent of readers don't look at the source.

It is little wonder that 'fake-news' has entered the lexicon because news stories on the internet can appear with no fact-checking, no journalistic integrity and, occasionally, deliberate attempts to lie and obfuscate. What is more concerning is that once a story is online, it is there forever. However, while the way news is consumed is changing, the report found that most content still comes from newspaper groups and broadcasters.

Facebook is the dominant social media news source with 44 per cent of those surveyed using it to find, read, watch, or comment on news each week. Up to 28 per cent say that Facebook is their main source of news.

Social Media users in Australia are some of the most prolific in the world, with around 60 per cent of the country's population being active users on Facebook, and 50 per cent of the country logging in at least once a day.

Up to 28 per cent say that Facebook is their main source of news

Facebook Groups of interest https://www.facebook.com/groups/AusForesters/

https://www.facebook.com/InstituteofForestersofAustralia/



AUSTRALIAN USAGE STATISTICS – MARCH 2018

Facebook – 15 000 000 Monthly Active Australian Users (steady). Facebook's recent data shows there are now 15 million active Australians on Facebook and given that to register for Facebook a person must be over 13 years of age, that number represents around 75 percent of the total Australian population. Around 50 per cent of the Australian population logs into Facebook on a daily basis.

YouTube – 15 000 000 Unique Australian Visitors per month (UAVs)

LinkedIn – 4 300 000 Monthly Active Australian Users approx. LinkedIn reports there are 8 million registered users in Australia, and just over half of this number log in every month.

Twitter – 3 000 000 Monthly Active Australian Users

Stats Source: Vivid Social – Social Media Agency.

(All figures represent the number of Unique Australian Visitors [UAVs] – unless otherwise stated) Facebook Data includes users of desktop, mobile, application and messenger services).¹

1 Statistics compiled by SocialMediaNews.com.au for March 2018. Source: Vivid Social - Social Media Agency. Figures correct as of 31/03/18.

Mobile Pyrolysis Plants for biofuel production

Christos Karantonis - Managing Director Pyrotech Energy christos.k@pyrotechenergy.com



Use of Bioenergy—energy produced from organic matter or biomass has the potential to increase energy security, promote economic development, and decrease global warming pollution.

After many years of development Biomass Pyrolysis has finally matured as a commercial technology. The goal is to use heat in the absence of oxygen to convert the biomass to a more useful form while preserving as much of the carbon possible. The water and oxygen associated with the carbon is reduced. In commercial practise, pyrolysis is the simplest and lowest cost option for converting wood waste and agriculture residue into biofuels and bio-chemicals.

Currently, our rate of consuming fossil-based raw materials has exceeded the ecological carrying capacity of our planet and the only way reversing this trend is to implement technologies that will allow us to get the planet back onto a sustainable path. There is no other product that promotes this objective more effectively than wood waste. It generates much more renewable energy than is required to maintain, dispose, burn or leaving it to rot creating more CO2 emissions. This supports the general concept of recognising the carbon cycle within nature and ensuring modern energy sources reflect this pattern.

Forest reserves and agribusinesses that serve as carbon sinks and those that are sustainably managed



are directly linked to combating climate change and to the goals of promoting sustainable consumption and production methods. The forestry industry is also an example of a sector that enables jobs, infrastructure, innovation in the bio-economy and waste to energy industry around the world and plays a critical role in establishing cities and local communities on a sustainable basis.

Responsible forestry is similarly in line with the objectives for life on our planet, and is a condition of future forest growth, protection and remediation of terrestrial ecosystems, promotion of their sustainable use, and an end to soil erosion and loss of biodiversity. We can respond to these requirements by processing renewable wood from responsible sources in a way that extracts everything from this raw material. This included converting what would have been considered 'waste material' into biofuels and bio-chemicals.

All sustainable activities are naturally based on the idea of not wasting resources, living beyond one's means, or exceeding the carrying capacity of human beings or the environment. In this respect, making new bio-products from industrial side streams and waste is something that Pyrotech Energy fosters and is quite different from merely burning wood.

One example of the practical significance of emission reduction targets for various industries is that they will lead to increasing concern over the carbon footprint of products and the forms of energy that are used in their manufacturing processes. Forest industry byproducts already emerge as clear winners under any such scrutiny, compared to industries that rely on fossil raw materials. A product that is made from a renewable raw material using renewable energy by a process that generates a surplus of renewable energy – and on top of that is also recyclable is bound to satisfy sustainability requirements completely.

Pyrotech Energy is a leading technology licensor and provider of equipment, engineering support and service to the waste to energy industries. Our company has commercialised the process for the conversion of wood waste and agriculture residue into biofuels and bio-chemicals. Our company wants to contribute to a more sustainable society by providing a renewable alternative to fossil fuels. This will be done through the delivery and deployment of our Mobile Pyrolysis Plant Technology for converting biomass to biocrude oil, syn-gas, biochar and wood vinegar in an environmentally, socially and economically sustainable manner and is based on four principles.

- 1. A mobile unit goes to the biomass storage location which may be close to the harvesting site.
- 2. The Mobile Pyrolysis Plant locally converts biomass into bio-crude oil, syn-gas, biochar and wood vinegar.
- 3. The syn-gas is used locally to generate electricity.
- 4. The bio-crude oil and bio-chemicals can be used locally or transported to another facility at a significant cost reduction compared to transporting the unrefined biomass.

This concept of localised Mobile Pyrolysis has been introduced because, in the long term, central processing of biomass is not viable because of heavy up front capital cost and intensive ongoing funding. Centralised processing always remains dependant on the owners of the biomass as well as being subject to high and variable transportation costs and labour costs. If the biomass owners increase their price then central plants will no longer be economical viable.

Our concept is fundamentally different using one of two models; the 2 tonne - Mobile Pyrolysis Plant or the 10 tonne - Mobile Pyrolysis Plant.



Our biggest model converts every 10 tonnes of feedstock into:

- 2500 litres of bio-crude oil with HHV at 24 MJ/lt,
- 1 Tonne of Biochar,
- 2500 litres of Wood Vinegar on a daily basis and
- Syn-Gas Nett equal to 50 KW/h for every hour that the Unit operates.

Note that the plant's unique, patented reactor is capable separating the biomass to fragmentations without any waste streams and with no catalytic converters.

Turning waste wood into bio-crude oil and biochemicals gives the opportunity for the forestry industry and agri-businesses to take advantage of this waste stream so owners can augment their income and increase their competitiveness globally. Converting wood waste into bioenergy and bio-chemicals is a method of producing a fossil fuel replacement of high value at a low cost as the biomass material is compressed to a quarter of the volume of the original waste and half of the volume of converted wood pellets.

We are here as an organisation dedicated to propel innovative environmental solutions for the forestry and agriculture industry to foster global sustainability through research, development, and campaigns that promote environmental education, green smart technologies and local job growth.

For more information contact us at <u>info@</u> <u>pyrotechenergy.com</u> or visit our website at <u>www.</u> <u>pyrotechenergy.com</u>

ANU partners with professional institutes to promote Canberra's Living Infrastructure

Canberra is globally unique as a planned city in a forest. As with many other elements of their design for the new capital, the Griffin's vision of Canberra was ahead of its time in recognising the many benefits of a treed urban landscape. Those benefits – for human health and wellbeing, and for the environment – are now much more widely recognised.

It took decades of work and experimentation – led first by Charles Weston and subsequently by Lindsay Pryor – for the Griffin's vision to be realised. They and other forestry and landscape professionals recognised how challenging an environment Canberra's limestone plains presented for the sort of treescape that the Griffins imagined. But progressively, the street, park and household trees suited to Canberra's climate and soils were identified and established on an unprecedented scale. Today, there are two street or park trees for every Canberran, cooling streets and buildings, sequestering significant amounts of carbon, trapping particulate pollutants, improving soil water retention, and housing much of Canberra's biodiversity.

A century on, we face new challenges associated with climate change and transitioning to a more compact city as our population grows. Some tree species in our urban forest are not well-adapted to the hotter, dryer and more extreme climate future expected for the ACT. A <u>recent CSIRO study</u> for the ACT Government on surface urban heat identified the importance of urban trees and lakes in keeping our city cool and people healthy.

Two professional associations concerned with urban forests, the Institute of Foresters of Australia and Australian Institute of Landscape Architects, with the ANU's Fenner School of Environment & Society and Climate Change Institute, used <u>International Day of Forests 2018</u> on 21 March, with its theme of *Forests for Sustainable Cities*, to convene a 'field forum' at the National Arboretum Canberra. Professors Mark Howden (Director, <u>ANU Climate Change Institute</u>) and Saul Cunningham (Director, <u>Fenner School of Environment & Society</u>) joined <u>Institute of</u> <u>Landscape Architects</u> ACT Past President Catherine Keirnan and <u>Institute of Foresters</u> ACT Co-Chair Peter Kanowski in discussing how academics and professional associations could work most effectively with government and the community to respond to these challenges. The ACT Government's recently released Living Infrastructure <u>Information Paper</u>, part of the process of developing a <u>new ACT</u> <u>climate strategy</u>, offers an immediate focus for that collaboration.

Future-proofing Canberra's treescapes will also be high on the agenda for the upcoming ACT Tree Week (30 April - 6 May) and the joint IFA/AFG national conference at ANU, on *Trees for Healthy Cities, Farms and People* (2-5 September).



International Day of Forests Field Forum speakers: Prof Mark Howden, Prof Saul Cunningham, Ms Catherine Keirnan, Prof Peter Kanowski



MEDIA RELEASE

Senator the Hon. Anne Ruston Assistant Minister for Agriculture and Water Resources

ROYAL STANDS TALL ON SUSTAINABLE FOREST MANAGEMENT

His Royal Highness, The Prince of Wales, yesterday participated in a forestry roundtable meeting hosted by the Institute of Foresters Australia in Queensland's Mossman Gorge.

Assistant Minister for Agriculture and Water Resources, Anne Ruston, said it was a great opportunity to highlight the sustainable practices of Australia's forest sector.

"It was an honour to join His Royal Highness to discuss the integral role of Australia's native forests and plantations in providing a renewable source of timber, and the role trees can play in dealing with international issues, such as climate change," Minister Ruston said.

"The roundtable meeting was an important opportunity to renew Australia's commitment to a high-tech, carbon positive, renewable forestry future.

"HRH The Prince of Wales has been a passionate advocate of sustainable forest management and how it can help solve economic, social and environmental issues facing the world.

"Australia stands resolute to meet these growing challenges.

"It was incredibly generous of His Royal Highness to join us to discuss Australia's place at the forefront of global sustainable forestry practises.

"Not only does the Australian domestic timber industry support many of our regional communities, it has the potential to provide opportunities for expansion of both indigenous and farm forestry."

Minister Ruston said the Coalition Government was committed to delivering a new forestry future for Australia underpinned by an integrated and sustainable landscape approach to the management of all our forest resources.



IFA hosts Forestry Roundtable

The Institute of Foresters of Australia hosted a roundtable on forestry with His Royal Highness The Prince of Wales in the World Heritage Daintree Rainforest last Sunday.

Rob de Fégely, Vice-President of the Institute of Foresters of Australia said: 'It was a once in a lifetime meeting and I believe a meeting of minds about the challenges we face in managing forests not only in Australia but around the world.'

Roundtable attendees included Senator the Hon Anne Ruston Assistant Minister

for Agriculture and Queensland Minister for Agricultural Industry Development and Fisheries the Hon Mark Furner MP.

The Roundtable commenced with a welcome to country and smoking ceremony undertaken by Kuku Yalanji elder Mr Roy Gibson.

His Royal Highness then took a guided walk on the BaralMarrjanga elevated boardwalk in the rainforest with Mr Brett Stallbaum the Cape York manager for Qld Parks and Wildlife Service along with Rob de Fégely and Geraint Richards the Head Forester for the Duchy of Cornwall.

His Royal Highness has a well-known passion for forests and the natural world.

THE PRINCE OF WALES

In recent years, he has provided support to the professional forestry institutes in Australia and New Zealand and prior to that in Canada and United Kingdom.

Forest researchers have the International Union of Forest Research Organisation (IUFRO) to unite them but practising forest managers currently have no international forum. The Institutes are in the process of establishing an International Network of Professional Forestry Associations and the Institute of Foresters of Australia is the initial secretariat.

The industry is also struggling to recruit young foresters to manage our forests for conservation and production. It has lots of specialists but recognises a need for the broad practical skills of foresters to ensure all the values of forests are protected. Managing forests without foresters would be like a health system without GPs Mr de Fégely said.

To assist this process His Royal Highness has supported two awards for young foresters, The Prince of Wales Sustainable Forestry Award and The Prince of Wales Leadership Award. The latter being an exchange opportunity to work in forest management in another country.

The two recent recipients of the Prince of Wales Sustainable Forestry Awards, Mr Jesse Mahoney from Australia and Mr Alfred Duval from New Zealand were present at the Roundtable. Both expressed their thanks to His Royal Highness stating how much the award and recognition meant to them.

In concluding the Roundtable Mr de Fégely thanked His Royal Highness for taking the time to meet and for his continued support.





THE INSTITUTE OF FORESTERS OF AUSTRALIA

11 April 2018

Media release

IFA hosts Forestry Roundtable with His Royal Highness The Prince of Wales The Institute of Foresters of Australia hosted a roundtable on forestry with His Royal Highness The Prince of Wales in the World Heritage Daintree Rainforest last Sunday.

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Media contact: Bob Gordon, (02) 6153 3044 Images: https://www.dropbox.com/sh/2p45ycsxn1oxge7/AABltbmXo25cG5lBXnc3zDaNa?dl=0

Australia's professional body for foresters and other forestry professionals admin@forestry.org.au <u>www.forestry.org.au</u>

Forests for healthy cities, farms and people



Media release

Major drawcard announced for Canberra Forest Conference

Canberra, 24 *April 2018* - An exciting line-up of speakers has been announced for the 2018 Joint IFA-AFG Conference - Forests for healthy cities, farms and people. Speakers will address the major conference themes which include:

- the increasing importance of urban forests in our growing cities,
- the continuing importance of trees on farms for productive and sustainable rural landscapes, and
- our increasing understanding of the links between healthy tree-scapes and healthy people.



Senator, the Honourable Anne Ruston Assistant Minister for Agriculture and Water Resources.



Jacki Schirmer Associate Professor at the University of Canberra.



Prof. Kate Auty ACT Commissioner for Sustainability and the Environment.



Fiona Simson President of the National Farmers' Federation.



Kenneth Er Chief Executive Officer of Singapore National Parks Board.

Dr Graham Farquhar

at The Australian

and 2018 Senior

National University

Distinguished Professor

Australian of the Year



Kathryn Williams Associate Professor in environmental psychology at the University of Melbourne.

Pictures and more information at: https://forestry.org.au/ifa/conferencespeakers-2018

Conference registration: https://forestry.org.au/events

Media contact: Professor Peter Kanowski 0423 863 347

Australia's professional body for foresters and other forestry professionals

admin@forestry.org.au www.forestry.org.au

Buy, Swap and Sell?? – AFG's marketplace

When the AFG website was overhauled and renewed in 2016 we included a Marketplace for members to advertise their products or properties etc. <u>https://www.afg.asn.au/marketplace</u>

This was based on a very successful part of the NZFFA website. Perhaps there has been little awareness of this AFG initiative as there has been very little use of this part of our website.

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We would be interested in feedback on why not?

If functionality is an issue or it is not being picked up in search engine searches for logs, timber or other farm forestry products we would like to address this and see greater use of the site for the benefit of members.

Thoughts?

To fix landscapes, first get the right tools

Restoring hundreds of millions of landscapes requires ample decision-making – and mechanisms to help

BARBARA FRASER @barbara_fraser

By pledging to restore millions of hectares of deforested and degraded land, countries take a first step on a road shaped by a broad array of local decisions. Natural regeneration, tree plantations or both? What about a mosaic landscape of natural forest, agriculture and agroforestry?

Fortunately, researchers, practitioners and decision makers have increasingly more tools at hand for answering these questions, evaluating trade-offs and making choices. But on-the-ground experience reveals critical gaps that have yet to be addressed by any method, according to new research.

"Tools to aid in forest landscape restoration are continually proliferating, and existing ones are being refined," says Robin Chazdon, research professor at the University of the Sunshine Coast in Queensland, Australia, and co-author of the paper, which reviews tools that are available and offers recommendations for future development.

"We wanted to take stock of where we are, identify the gaps and see where filling those gaps would really make a difference."

Worldwide, nearly 50 nations have pledged to restore 160 million hectares of deforested or degraded land as part of the 2011-launched Bonn Challenge. The goal is to have 150 million hectares under restoration by 2020 and 350 million hectares by 2030.

"The goal of forest landscape restoration is not just to increase tree cover or perhaps carbon capture – especially in countries where deforestation is a prime source of greenhouse gas emissions – but also to restore ecosystem



From high-level methodologies to phone apps and games, decision-support tools are crucial for successful landscape restoration. CIFOR Photo/Ricky Martin

functions and improve local livelihoods," says co-author Manuel Guariguata, principal scientist at the Center for International Forestry Research (CIFOR).

"To this end, prioritization exercises through the application of decision support tools for guiding restoration objectives are paramount."

ROAM AROUND THE WORLD

Experts estimate that restoration of 350 million hectares of deforested and degraded land by 2030 – the goal of the

globally-supported Bonn Challenge – will yield as much as USD 170 billion annually in net benefits by protecting watersheds, supporting the production of crops and forest products, increasing rural development and reducing poverty.

The challenge, though, is to put national reforestation and restoration pledges into action at the local level, where, as Chazdon says, "there is no one-size-fits-all solution." Needs and opportunities vary from country to country, but even within a single country or region, restoration may take many CIFOR

different forms, depending on the type of ecosystem, the extent of degradation and the needs of local communities.

Several methodologies have been designed to help countries or regions analyze possibilities for forest landscape restoration (FLR). The Restoration Diagnostic is a tool for developing national or regional strategies, while the Restoration Opportunities Assessment Methodology (ROAM) helps national planners identify priority areas for restoration within their territories.

"Quite a few countries have used ROAM in preparation for undertaking restoration, but going from this high-level planning exercise to implementing restoration in real landscapes involves another set of steps, and there aren't many tools out there to help that process along," Chazdon says.

In addition, an overemphasis on land degradation as the 'problem' and restoration as the 'solution' may lead to an overly narrow focus, Chazdon and Guariguata say.

In the report, they state: "In reality, the problem is lack of food security, inadequate water supply, high risk of catastrophic fires, climate change and loss of species. Wellplanned forest landscape restoration programs can go a long way to resolve these problems without the need for land degradation assessments."

Instead of considering only degradation, the authors suggest "a focus on areas where multiple restoration benefits can be achieved for minimal cost."

They recommend combining different restoration options in mosaic landscapes, which could involve turning highly degraded areas into sustainable cropland, agroforestry areas or woodlots of native species.

Besides providing livelihoods and ecosystem services to local communities, such an approach could also yield a return on the financial investment, they say.

That type of planning requires land-use and land-restoration decisions to be made locally, with the involvement of communities, local governments, businesses and other stakeholders. Because most of the tools currently available

are designed for restoration planning at the national level, there is a need for methodologies to help with local decision making, Chazdon says.

"More and more local communities are gearing up for landscape restoration," she says. "They recognize the need to restore their land and improve their livelihoods. We need to reach out to those groups and help them get started and reach their goals."

Tools to aid in forest landscape restoration are continually proliferating, and existing ones are being refined. Robin Chazdon, research professor at the University of the Sunshine

Coast

Some tools already exist to help planners map the multiple ways in which landscapes are used. To help weigh the tradeoffs that inevitably come with land-use decisions, however, more data is needed about economic costs and benefits of landscape restoration, Chazdon says.

Also needed are tools designed for local planners and community members who may not have the experience or technical skills necessary to use sophisticated modeling techniques.

"Other tools could help them look at economic benefits and develop scenarios, such as where they establish agroforestry, a plantation for commercial timber, an orchard or a silvopastoral system," Chazdon says.

Apps or games could provide a user-friendly way to test different combinations of restoration options for mosaic landscapes, calculating how much carbon they could store over time or how they would affect water supply. They should also include social impacts, such as potential sources of income, which are often overlooked in landscape planning, she says. Restoring ecosystem functions may take decades, but members of local communities need immediate sources of income. By testing different scenarios, people could see the potential effects of combining short-term production of crops or fast-growing timber species – such as eucalyptus – with longer-range actions, such as encouraging natural regeneration or planting more valuable timber species that may take 30 or 40 years to mature but will fetch higher prices in the market.

Part of the complexity of forest landscape restoration is that decisions made today may only fully bear fruit several decades – or even several generations – from now. Monitoring, so that adjustments can be made to adapt to changing conditions, poses another challenge for tool designers.

"What I find exciting about designing decision support tools is that they provide an opportunity for coordination among researchers, practitioners and policymakers," says Chazdon. "They provide a way to work together, because many people in those three areas can be involved in trying them out and providing feedback."

International interest in forest landscape restoration is growing, with Latin American countries committing to bring 20 million hectares into restoration by 2020 and an African pledge to bring 100 million acres into restoration by 2030.

Policymakers, government officials, community members and scientists now face the challenge of turning those commitments into plans that will result in greener landscapes and better livelihoods for local communities. Before long, they may find that there's an app for that.

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Operating from the Center for International Forestry Research (CIFOR), a non-profit scientific institution and CGIAR Research Center, Forests News features the latest research findings and insights from the field via compelling multimedia packages, while maintaining commitment to scientific accuracy, and journalistic styles and principles.

ANU Forestry Education

Assoc Prof Cris Brack

The Fenner School of Environment and Society was happy to host the 2018 Gottstein Wood Science Course in February this year and, as the articles in the February issue of The Forester make clear, a great and informative time was had by all.

Another consequence of the great interaction during this Course was an invitation for the Fenner School

to be involved in the Primary Industries Education Foundation Australia (PIEFA) conference in the first week of May – which is Tree Week in the ACT. The theme of this conference is "Food and Fibre: The original STEM" and it is promoting Science, Technology, Engineering and Mathematics - especially to secondary school teachers - to help improve student interest and uptake in these vital areas. We are taking the opportunity of demonstrating that "Forestry" is much more than a bit of biology and just walking around



The Fenner School in conjunction with the National Arboretum Canberra enthuses students about forests and forestry during the National Youth Science Forum (2018). Dr Roger Hnatiuk (a volunteer guide with NAC) here explaining the evolution of the landscape and the representative trees at the Arboretum to NYSF students

forests and beautiful landscapes (although it is that too), but also includes a wealth of STEM expertise, ranging from rocket science (satellites and remote sensing) through to robotics and virtual reality landscapes.

After PIEFA in ACT Tree Week for us is "Australia's World Forestry Centre Education Institute Program" over two days at the National Arboretum Canberra. The Fenner School is assisting ForestLearning (a program of Forest and Wood Products Australia) and the World Forestry Center to run the first Australian adaptation of the internationally renowned "International Educators Institute (IEI) program". We will be ending the work week with the "Tree Week Symposium" at the National Botanic Gardens. This symposium has a distinctly urban forest theme with experts and practitioners presenting on a range of topics from raising seedlings for urban forests, use of biochar and the joys and tribulations of growing trees in highly populated areas through to the history of Canberra's treescape, trees living and dying in the city and climate change. If you only had one week to visit Canberra for its trees, ACT Tree Week would have been it! But if you missed that week, you can still benefit if you come to the IFA – AFG Conference we are finalizing for Canberra, 2-5 September 2018, whose theme is "Forests for Healthy Cites, Farms and People". Of course, we are promoting the Week and the IFA – AFG Conference to our students who are in the great position of being in the middle of all this activity.

And, of course, during all the preparations for ACT Tree Week and getting ready for the intensive courses in June, we took a bit of time to celebrate ANU's position in the QS World Subject Ranking: Agriculture and Forestry for ANU moved up two places over 2017 to now ranks at number 19 in the world.

Forest industry adds \$731 million to the Queensland economy: new report

The forest industry contributed \$685 million to the Queensland (QLD) economy in direct sales alone last financial year, increasing to a total of \$1.624 billion once flow-on effects in other industries are included. This led to a total contribution to gross regional product (the regional equivalent of GDP) of \$731 million.

That was among the key findings of a new industry snapshot funded by Forest & Wood Products Australia and conducted by the University of Canberra in conjunction with consultancy EconSearch, a division of BDO.

In terms of jobs, the QLD forestry industry generated over 8,400 direct jobs including almost 3300 in forest growing and initial processing, and over 5100 in secondary processing.

The plantations of southern pine generate the largest number of jobs (1666 in growing and initial processing), followed by timber harvested from native eucalypt forests (691 jobs), Araucaria plantations (608 jobs) and native cypress forests (207 jobs) – showing the QLD forest industry draws on timber from a range of sources.

All these areas also generate further jobs in 'secondary processing' of initial timber products into further products, with imported timbers also used in the secondary processing sector.

The industry is an important contributor to the economy in several regional communities, and contributes to diversification of the economy in many regions. While most jobs - 5167 - are in the South East region that includes Brisbane, 1837 were generated in the Wide Bay Burnett



region, 919 in the Southern region, 393 in the Central region, and 577 in the North region.

The Local Government Area with the highest dependence on the forest industry for employment was Gympie, with 4.6% of jobs directly dependent on forestry.

While ABS Census data shows a 40.7% decline in total employment in the forest industry between 2006 and 2016, reflecting both increasing productivity in some parts of the industry and overall decline in size of other parts, this overall trend masks some differing trends within different industry sectors.

For example, between 2011- 2016, there was growth of 9.5% in employment in jobs involving establishing, managing and harvesting forests and plantations.

QLD forest industry workers are slightly less likely than those in other industries to earn lower incomes (less than \$600 per week), largely due to the higher rates of full-time work, but also less likely to earn high incomes (above \$1250 per week).

In addition, 3% of the industry's workforce identifies as Aboriginal or Torres Strait Islander, slightly higher than the 2% amongst QLD workers more generally. Over 70 per cent of forest industry businesses reported difficulty recruiting heavy machinery operators, people with skills in occupational health and safety training and those able to operate hand-held machinery such as chainsaws.

Lead researcher Associate Professor Jacki Schirmer said that businesses remain hopeful:

"A little less than half surveyed (45%) felt demand would remain the same, and the remaining businesses (55%) felt that demand would grow over the next 12 months.

"That said, obtaining labour, the increasing cost of labour, government regulations and rising input costs are still big challenges for many businesses.

"It is important to remember that the majority of forestry jobs are generated by the processing sector, as is the majority of the industry's flow-on economic impact. This highlights the importance of local processing of wood and fibre for generation of jobs."

Dr Schirmer would like to thank the Queensland Department of Agriculture and Fisheries for their support in the project.

To read the report *Socio-economic impacts of the forest industry – Queensland* in full, visit the <u>FWPA website</u>.

Promising results for restoring biodiversity in dense regrowth forests

New research on the impacts on biodiversity of 'thinning' White cypress pine trees (*Callitris glaucophylla*) has yielded promising results, finding many positive relationships between the management practice and the diversity of species in NSW forests.

The project, led by the NSW Department of Primary Industries (DPI) and funded by the NSW Environmental Trust, with support from Forestry Corporation of NSW, is one of the most comprehensive studies on thinning of regrowth available.

DPI Principal Research Scientist Dr Brad Law said more than 200 species were recorded during the three-year study of the central-western NSW Pilliga forests.

"Although silvicultural thinning is a well-known technique for management of dense regrowth forests, few studies have assessed its impacts on biodiversity, especially in Australia," Dr Law said.

Boasting more than 535,000 hectares in size, the Pilliga represents the largest inland woodland in Australia, with cypress pine being a dominant tree species in many areas.

The area comprises a number of State forests and Conservation Reserves

"Research in the Pilliga considered the short and longerterm responses of vegetation structure to thinning, and this first phase has recently been published," Dr Law said.

"We also examined the responses of multiple taxa – from bats, birds and insects, to reptiles, non-volant mammals and plants – by undertaking surveys at different times since previous thinning in the forest."

An experimental trial was established by the Forestry Corporation of NSW in association with DPI to measure the response of biodiversity to thinning at two different stages of regeneration: early thinning and second thinning.

"Biodiversity and habitat surveys were completed pre- and post-thinning, and are being compared to long undisturbed reference sites," Dr Law said.

"The extensive experiments revealed that habitat values, particularly the volume of coarse woody debris used for shelter by animals was positively associated with thinning. Flora and fauna responses were positive or neutral for each group, and when combined into a composite biodiversity index, the overall effects were positive.

"Achieving sustainable forest management requires balancing production with biodiversity conservation. As such, there is now increased interest in thinning for positive ecological outcomes, including for biodiversity.

"Through this research, we can now conclude that thinning in cypress pine restores habitat, as it can accelerate the development of many, though not all, habitat values."

Dr Law suggests forest managers should consider applying thinning at patch-scales rather than across broad landscapes, noting that the trial considered thinned patches of only 12 hectares in size.

"Unthinned forest regrowth contributes to the mosaic of forest structure, especially as it represented habitat of similar value to thinned forest for some taxa," he said.

"This highlights the importance of managing an assortment or patchwork of forest structure that will be suitable for a diverse suite of flora and fauna." The study found that the main negative outcome of thinning was the loss of small dead trees, which provide hollows for insectivorous bats and reptiles in the forest.

"Radio-tracking showed bats preferentially foraged in recently thinned stands, but avoided roosting there during the day. Even small dead trees can contain hollows and these are key structures to retain during thinning operations," Dr Law said.



In addition to a number of ongoing forest science projects, DPI will continue to track biodiversity over time at the thinning trial sites to assess the response of biodiversity as habitat structure changes.

For more information on the project, visit <u>https://www.dpi.</u> nsw.gov.au/info/forestry/biodiversity

NATURAL WOOD

New research: Wood a key plank in the business case for bringing nature into the office

Employers looking to boost worker productivity should consider using more of one of the world's oldest and most sustainable materials in their office fit-outs: wood. That's the takeout from world-first research by strategic market research firm Pollinate and the University of Canberra.

Based on a survey of 1000 indoor Australian workers, the research provides fresh evidence to underpin the business case for biophilia – the principle that exposure to nature increases human wellbeing.

The study paints a bleak picture of workers' current access to nature at work with less than half (47%) enjoying access to natural light, only two in five (38%) being able to see indoor plants, a quarter (26%) unable to see any natural looking wooden surfaces and almost half (46%) spending less than an hour outdoors on work days.

The study found that the more natural looking wooden surfaces workers could see from their workstation, the higher their workplace satisfaction and wellbeing.

Ahead of an address to the Green Cities conference in Melbourne on 14 March, Associate Professor Jacki Schirmer from the University of Canberra said the results held true even after rigorous analysis that controlled for factors known to impact on the wellbeing of workers such as age, income, gender and workplace culture.

"These results are exciting, for the first time providing solid evidence to support the use of wood as part of bringing nature into workplaces," she said.

"We are always looking for ways to improve health and wellbeing, and this research points to ways we can achieve that in the places many people spend a lot of their time – the workplace.

"The work has implications for businesses, because a large body of research has shown that workers who are more satisfied with their work and have higher wellbeing have better work productivity, and reduced rates of absenteeism – which means improving worker wellbeing has real benefits for businesses."

Over 80 per cent of workers (82%) exposed to eight or more wooden surfaces in their workplace reported being 'satisfied or very satisfied' with work, compared to over two thirds (69%) exposed to five to seven wooden surfaces and half (53%) with no wooden surfaces.

Employees working in offices with natural wooden surfaces on average also reported higher personal productivity, mood, concentration, clarity, confidence and optimism.

The effect on wellbeing was greatest when wood

was used in combination with other natural elements such as plants, water features and natural light.

Associate Professor Schirmer said: "We know it's good for us to spend time outdoors interacting with nature, but with people spending so much time indoors, there's increasing recognition of the potential benefits of bringing nature into the workplace and the home.

"The academic world is becoming increasingly switched on to biophilia as an area warranting real research and attention, and some engineering degrees are starting to include it as a subject.

"Importantly, wood is a particularly useful tool for bringing nature into the workplace in situations where it is not feasible to retro-fit other changes, such as increased natural light."





Farm Forestry Toolbox workshop participants and trainers, Changmai, March 2018.

Farm Forestry Toolbox in Asia

Adrian Goodwin

Members of the IFA and AFG are no doubt aware of the Farm Forestry Toolbox (FFT), a collection of programs for owners and managers of small to medium forest holdings, designed to assist with mapping, tree measurement, and product management. Conceived in Tasmania in the 1990's, it has steadily matured to become applicable both nationally and internationally.

In March 2018, a five-day workshop was held in Thailand for 14 middle/senior foresters from Thailand, Myanmar, Cambodia, Vietnam and Laos (i.e. ACMECS countries), funded by the Thailand International Cooperation Agency (TICA), and run by Kasetsart University.

It was presented by co-developer and expat Andy Warner, and as the FFT's other

developer I was there to assist with training and to observe quirks and issues with the software. The workshop was based on a new 120-page manual which must surely make FFT the best-documented forestry software in the universe!

Despite English being a second language for all participants, the workshop was enthusiastically received.

The main feedback was that five days was not long enough, and that an advanced workshop was required. Those of you who have sat through single-day FFT workshops with sanity intact have done amazingly well! FFT's current version is 5.4.3q and it is continually evolving. However, it has been nearly two years since I last updated its main download web site at Private Forests Tasmania (PFT) because I've been concerned with formatting problems arising from Windows 10 and high-resolution screens. These issues have now been mostly resolved, and each update of the development platform (Microsoft Visual Studio, VB.NET) has improved the situation.

FFT is free to download and use, and it can be downloaded from the PFT website (version 5.3.8) or from me at <u>AdrianGoodwin@bushlogic.com.au</u>. Further information can be found on

http://www.pft.tas.gov.au/services/services/ farm_forestry_toolbox_-_version_5.3.8b and

https://en.wikipedia.org/wiki/Farm_ Forestry_Toolbox .



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Farm Forest Growers Victoria

NORTH EAST REGION TIMBER TRIP 6-8TH APRIL 2018

Getting returns from Small Scale Timber

On the Saturday night 7th April, at The George Kerferd Hotel, Simon Penfold addressed 20 Farm Forest Growers on his experience growing and harvesting 10 hectares of pine trees (*Pinus radiata*).

He also described growing Southern Mahogany in the Northern Territory.

Simon Penfold is a forester and also small scale forest grower at Whorouly East, North East Victoria.

This dinner was one of many highlights of the Farm Forest Growers Victoria 1018 Autumn Tour.

Small Scale or Farm forestry is more than just producing sawlogs. It is also about micro-climate modification, benefits for animals, adjacent pasture, carbon capture, and other crops from the forests (nectar/honey, mushrooms, bush tucker).

However saw logs are an important part of the equation.

Australia is a net importer of timber.

After over 50 years of farm forestry there are sawlogs looking for markets.

Future farm forestry planting will be heavily influenced by the ability of farmers to sell the current mature crop.

Thus the main focus of the weekend was turning trees into logs, turning logs in to rough sawn timber, turning rough sawn timber into dressed timber, and justifying planting trees again. The tour started in Euroa with a visit to Euroa Timber Co. They convert rough sawn timber into dressed tongue and groove floor boards mouldings for architraves.



Picture: Brad Miller showing shining gum (E. nitens) floor floor boards produced from farm forestry timber from near Taggerty.

The logs had been rough sawn by John Coyne.

Brad is able to process rough sawn farm forestry timber on a consignment basis.

The tour then moved back along the supply chain and visited Sarah De Crespigny and her Sydney Blue gum (*E saligna*) plantation near Benalla.

The Sydney Blue gum were planted in 1996 as part of the state government FFORNE program.

Two years ago logs as small as 300 mm SEDUB (Small End Diameter Under Bark) were harvested and taken to Corsair Sustainable timbers. We would visit Corsair on the Saturday.



Picture: Sarah dwarfed by her trees, this one > 70 cm DBH (Diameter at Breast Height).

TheForesterAPRIL 201828

VICTORIA

Tour participants then took time-out to drive by the famous wall art in Benalla before finishing the day at The George Kerferd Hotel, Beechworth.

On Saturday Mal Heddon and Rodney Dale escorted a tour of the Carter Holt Harvey Mill in Myrtleford.

CHH is a trans Tasman company.

The Myrtleford ply mill is world class and uses pinus radiata logs from North East Victoria.

Hancock Victorian Plantations (HVP) is the main log supplier.

The mill supplies 30% of Australia plywood market.

The mill employs 200 people on site and there are a further 200+ jobs providing mill inputs off site.

The waste timber is burned to provide a sustainable source of heat for the industrial processes involve in producing ply wood.

The mill opened in 1974 as the result of amalgamation of several smaller local saw mills.

It operated a small mechanical hardwood pulp line up until 1999 and commenced ply wood production in 1981.

The ply wood lines were rebuilt in 2012 and there is now no saw mill.

Large saw logs are now trucked to Hyne Timber, Tumbarumba Mill.

The peeler line take 5.1 meters logs from 18 to 60 cm diameter. Preferred tree age is 27+ years

The logs are steamed before being taken to the peeler lathe.



Picture: Steamed pine logs waiting to be peeled into veneer.



Picture: Veneer straight off the lathe.

Next stop was at Heather Street's 10 ha shining gum (*E. nitens*) woodlot on the Street cattle property at Mudgegonga.

The trees were planted in 1998 as part of the state government FFORNE program. The advice then was shining gum suited average rainfall around 1000mm a year and was more frost tolerant than E. globulus. The plantation has been managed with high pruning and thinned to waste to leave 100 stems per hectare.

Many trees died during the drought in the first decade of the 21st century.

The trees provide a refuge popular with the cattle in hot and cold weather and during calving. In May-June 2017 12 tree were felled and taken to Corsair Sustainable Timbers.

Corsair Sustainable Timbers was the next stop on the tour.

The Street farm forestry logs were rough sawn by Denis Brown to yield about 10 cubic meters of rough sawn timber. We saw this being air dried.

It will be processed into tongue and groove floor and lining boards.

Denis Brown has been milling logs since 1993. He has about 10 years supply of black wood under cover. He also mills red stringy bark and Sydney blue gum.

It was here that we also saw the dressed product from Sarah DeCrespigny's farm forestry logs.



Picture: Denis Brown with tongue and grove boards processed from Sarah De Crespigny's farm forestry timber

VICTORIA

Denis Brown is confident there is a market for plantation grown timber or ethical timber.

After lunch in Yackandanda the tour continued to Lucas Mills at Wooragee.

Ian Schultz provided a tour of the manufacturing site.

Current sales are are around 1000 units per year with more than three quarters of sales into the international market.

There are over 30 full time employees on site with further jobs off site for outsourced manufacturing processes.

Ian then demonstrated the versatility and efficiency of the Lucas Mill. He set the mill up around a log in about 10 minutes. He then quickly transformed the log into to rough sawn timbers. Simon Penfold and Ron Harper discussed on site at Whorouly East, the process of replanting P. radiate after the harvest describe on Saturday night.

Simon also provided information on WeAct and the potential for Emissions Reduction Funding to provide an additional 1.5% returner green fields plantings.

Doug Cuneen conducted a tour of his Whorouly timber yard.

The Cuneen family have lived and breathed North East Timber industry from cross cut saw, horse and bullock to modern machinery.

Doug now produces firewood and sawn timber products.



Picture: Doug Cuneen with display of timber gear from another era and timber faced wall.

Marie and Andrew Walpole provided a BBQ lunch in Whorouly South,

The day finished in early afternoon with a tour of the Walpole's 20 year old pruned pines, blues gums (*E. globulus*) managed for saw logs, blue gums managed for pulp wood, blue gum coppice, and failed plantings of blackwood, cricket bat willow and shining gum.



The end of the day brought us back to Beechworth and The George Kerferd Hotel, for the Saturday night dinner. We were joined by local Farm Forest Growers and Jillian Roscoe.

Jillian Roscoe is from Wodonga and a representative for VAFI (Victorian Association Forest Industries).

The Autumn Tour finished on Sunday with a visit to Whorouly.

Amended PEFC Standard for Sustainable Forest Management out for Public Comment

he draft of the PEFC Sustainable Forest Management Meta-Standard has been released for public comment.

The Meta-Standard provides the base document against which all PEFC endorsed National Standards must align. It provides requirements for performance and sustainability indicators.

The amended draft provides new performance requirements for the sustainable management of trees located outside of forests and micro-forestry. Such sources of wood are becoming increasingly important, especially in developing Countries.

PEFC is seeking your comment and further information can be found on the link below.

https://consultations.pefc.org/consult.ti/PEFCSFM/consultationHome

TIMBER QLD

The Timber Queensland Conference report

by Jing Hu

I was funded by the IFA Leadership Grant to attend the Timber Queensland conference "Doing Timber Business in Queensland: Room to Grow" in Brisbane on 19 April 2018.

This conference joined the Queensland's forestry and timber industry together to

discuss the opportunities and challenges of timber market. It has been a great experience to attend this conference. This conference was very well organized and successful.

There was a well-balanced mix of established scholars, early career researchers, postgraduate students, forest growers and entrepreneurs who now work



Earlier this month, Timber Queensland hosted the second biennial state conference - Doing Timber Business in Queensland: Room to grow (18-20 April). IFA members Benjamin Finn (former FFI Chair), Kerrie Catchpoole (QLD Division) and Jing Hu (IFA student member) were among conference participants. Ms. Jing Hu attendance to the Conference was sponsored by the Young Forestry Leadership Initiative from the IFA, a grant from the Department of Agriculture and Water Resources incentivising leadership and professional development in Forestry. in the forestry and timber industry. I fully enjoyed this event with many insightful addresses. The addresses expanded from the future directions for plantation resources, the challenges and opportunities of Queensland's forestry to the growth of timber market and the commercial timber building market development.

The address from Rob de Fegeley "Queensland's place in the new Australian Forestry Plan-Challenges and Opportunities" and the talk "Plantation resources: future directions" from Steve Worley provided inspirations on the future directions of Queensland forestry and the importance of plantations.

We also visited the commercial timber office building (Kingsgate) by Lendlease in Fortitude Valley, with a talk from the senior development manager of Lendlease. I got a good idea of the construction, structure and advantages of a commercial office building with large use of timber. I learnt the cutting edge information on the advantages and challenges of the current commercial timber market.

I believe that both timber industry and plantations have great room to grow in the future.

It worked for Lester but survival experts advise against eating eucalyptus

When missing Melbourne hiker Julio 'Lester' Ascui was rescued after five days lost in the Grampians National Park, there was one aspect of his survival story that captivated people. As well as drinking from a creek and sleeping under a rocky overhang, Lester consumed eucalyptus leaves when his day-trip supplies ran out. Apart from losing an estimated eight kilograms and suffering from dehydration, Lester did not appear to have been seriously harmed by his survival strategy.

However, two experts have recommended that people avoid eating or chewing eucalyptus leaves in an emergency situation, or any other plants that have not been proven edible. Victorian Institute of Forensic Medicine associate professor of forensic medicine and forensic toxicology Dr Morris Odell said eucalyptus leaves contained a lot of chemicals including eucalyptus oil. Part of Dr Odell's work involves testing suspected criminals for drugs on behalf of the Victorian justice system. "Eucalyptus oil can be toxic if ingested," he said. "Plants produce hundreds of different chemicals, any plant, and some of those chemicals are better known than others. "So there could be other substances in eucalyptus leaves that could be toxic and there are hundreds of different species of eucalyptus and they are all a bit different and may produce different substances." Dr Odell said most of the research on the effects of eucalyptus on people had involved eucalyptus oil.

North Carolina State University has found that consuming large amounts of of eucalyptus oil was "extremely toxic" and could cause "nausea, vomiting, diarrhea and coma". Western Australia bush survival expert Bob Cooper has also told the ABC people should not eat gum leaves as they produced chemicals to deter hungry animals. Mr Cooper said people should avoid eating potentially unsafe items when lost as starvation was highly unlikely to kill them when compared to the risks of dehydration and exposure. Dr Odell also advised against eating eucalyptus leaves. "I don't think it's a real good idea," he said. "It's not advisable to consume unknown plant material of any sort, whether it's eucalyptus or not. "The only animals that we know eat eucalyptus are koalas who have specialised digestive systems for that purpose and are completely different from human digestive systems.

https://www.armidaleexpress.com.au/story/5151622/dont-eat-eucalyptus-if-you-get-lost-in-the-bush-experts/

Next generation forest plantation investment

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Institutional investors, superannuation funds and trusts are a likely source of funds for a new venture by universities and industry that aims to establish tree plantations to meet Australia's growing demand for wood. Philip Hopkins for Timberbiz

The immediate focus is on Gippsland and the Colac region of western Victoria, where rainfall and soil conditions are highly suitable for tree growing. However, if the model is successful it could be applied throughout Australia.

The project, 'Next Generation Forest Plantation Investment', is being driven by a team from Melbourne University, Swinburne University, Australian Paper, Hancock Victoria Plantations, Midway, AKD Softwoods and OneFortyOne Plantations.

This is a separate venture to the Victorian Government's plan, announced in last year's Budget, to spend \$110 million on plantations in the Latrobe Valley.

Given the failure of many government and plantation schemes in the past, a key focus of the project is generating new business models that can put trees in the ground. Investment in new plantations is at a standstill.

https://www.timberbiz.com.au

Project leader Rod Keenan, Professor of Ecosystems and Forest Science at Melbourne University, summarised the issues: industry needs more wood, the environment needs more trees, investors need sustainable and reliable sources of return on capital, and farmers need new income options that are fully integrated within their agricultural operations.

Professor Keenan said farm forestry had been promoted for some time.

"The missing element has been financial capital. The aim of this study is to come up with models that can link rural landowners with the finance sector and with industry," he said. "The project presents an opportunity to learn from past experiences."

Project partner Krzysztof (Chris) Dembek, a lecturer in social investment at Swinburne, said a new breed of investment was entering the market – "impact investment".

"These investors are tired of looking at just financial returns – they want to see the broader social and environmental impact, in addition to financial returns," said Dr Dembek, who was previously a research fellow at Melbourne University's Asia Pacific Social Impact Centre.

A recent research survey pointed to the growing importance of impact investing. The survey covered 123 Australian investors who account for more than \$333 billion of Australia's \$2 trillion under management. These investors include trusts and foundations, institutions, individuals and not-for-profit groups.

Dr Dembek said the survey clearly found there was a "massive amount" of money available in the next five years that wanted to move into impact investment.

Forestry was one key area of interest.

"Serious players are looking at that. At the same time, everyone agrees there are not enough deals that can match even the current appetite," he said.

"One of the problems is that most investment deals are small in size, especially for institutional investors like super funds, a deal size needs to be much larger to enter."

The rationale for the new project is multiple: adding timber to multi-use farmland has both environmental and economic benefits; the global demand for wood is growing while plantation investment has stalled, which will lead to an increased reliance on imports of timber products.

"There is a large area of farmland in Australia where different types of planted forest could be integrated with existing agricultural uses," Professor Keenan said.

He said key barriers to plantations on farms considerations were "social licence and reputational issues, farmer antipathy towards forestry and the legacy of the managed investment schemes." Other barriers are investment risk and uncertainty, lack of market diversity, a carbon price and value, the cost of resources, the need to share risks between growers and processors and the economic impact of cheaper, non-wood alternatives.

A recent meeting of about 90 stakeholders in Melbourne drew up a draft report and action plan. Features of the draft plan included:

Consistent federal, state and local regulations and frameworks to guide plantation investment.

Government financial support for an 'honest broker' agency to foster trust between capital, industry, landowners and growers.

Establish policies to encourage markets for the environmental benefits of trees, including carbon offsets.

New forestry models to encourage plantations that complement agriculture.

Support for natural capital accounting models that recognise plantations.

Promote champion landowners who have successfully integrated trees on farms.

Work with government, industry and the finance sector to make tree planting easy and attractive.

By 2030, the program is targeting 300,000 hectares of new industrial plantations and 100,000 hectares of farm forestry in diverse estates.

Professor Keenan said more meetings would be held to further the action plan.

For more information: <u>https://blogs.</u> unimelb.edu.au/nextgenplantations/

Wollemi Pine in Canada

A Wollemi Pine, one of the world's oldest and rarest tree species, was today bequeathed to the Canadian people as a gift to mark 150 years since the Canadian Confederation in 1867.

The Wollemi Pine was thought to be extinct, until it was rediscovered in NSW in 1994—previously known only through 90 to 200 million year old fossils.

Head of Plant Biosecurity at the Department of Agriculture and Water Resources, Dr Marion Healy, congratulated the people of Canada on reaching this milestone and highlighted the behindthe-scenes work that allowed the pine to travel safely around the world.

"This tree spent the first seven years of its life at the Australian National Botanic Gardens in Canberra where it grew to a height of two metres—only a fraction of its potential height of 40 metres," Dr Healy said.

"Departmental officers, along with staff from the Department of Foreign Affairs and Trade, the Australian National Botanic Gardens and the Canadian Government, worked closely to ensure the smooth and safe transportation of the Wollemi Pine to Ottawa.

"While a shame to ruin the surprise, it was important to work with Canadian officials to develop a thorough treatment and handling plan in order to head off potential biosecurity threats and ensure the tree survived the journey.

"The plant was treated with a fungicide and insecticide, and the growing media had to be steam treated to ensure that unwanted insects and plant material couldn't hitch a ride on the tree and threaten Canada's agricultural industries and environment, not to mention the close friendship between our two countries.

"The tree is believed to live for around 500 years, so I hope it will be on-hand to help Canada to celebrate its 650th anniversary."

Research hub seeks industry input

The new National Institute of Forest Products Innovation has kicked into gear in South Australia, with its industry-driven advisory committee electing Tammy Auld as Chair and planning a workshop to discuss the research priorities and strategy with interested industry professionals on May 10.

> Workshop to discuss research priorities and strategy with industry on 10 May

The Institute has been established to investigate innovation in areas such as forest management, timber processing, wood fibre recovery, advanced manufacturing and the bioeconomy. It will support the forest industry transition into a smarter, higher value focused



industry, one that will boost opportunities for jobs and growth in the forest and forest products sector.

Tammy Auld (pictured above) said the Institute hub would strengthen ties between research and the industry's strategic needs.

"South Australia not only has a long history in forestry, but a bright and innovative future with the potential for a range of new bio-materials and other opportunities to value-add," she said.

"Our focus will very much be on real world outcomes that are meaningful to industry, with priorities determined by industry." Ms Auld, Woodflow Manager at Timberlands Pacific, is joined on the committee by: Glen Rivers of OneFortyOne Plantations; Phillip Dohnt of LV Dohnt & Co; David Oliver of Timberlink; industry consultant Charlma Phillips; as well as Prof Christopher Saint of the University of South Australia who has been appointed as a non-voting observer to the Committee.

The Institute's Mount Gambier hub is also expecting to utilise and draw upon many of the resources made available through the University of South Australia's Mount Gambier campus, which is also home to a separate initiative, Forestry at Mount Gambier Hub or "ForMT", a collaboration with ForestrySA and Primary Industries and Regions SA.

IFPI's South Australian hub has received a \$4 million funding commitment from the Australian and South Australian Governments, and it is anticipated it will also attract industry support.

The Institution also has a further hub in Launceston, Tasmania.

Anyone who is interested in attending the regional briefing session can contact info.sa@nifpi.org.au

Rise of the machines

Aussie farmers must prepare for robotic future, says USC academic

A ustralian farmers are not prepared for a rapidly approaching robotic future, says USC information systems expert Associate Professor Don Kerr.

Associate Professor Kerr will be discussing this and other impacts of automation on small to medium

farms as part of a research network meeting in the United States of America from Saturday 5 May to Wednesday 9 May.

"We are looking at a global future of farming that includes driverless tractors, GPS systems that automatically manage fertiliser distribution, and eventually even mass greenhouse and lab food creation," Dr Kerr said.

"Farming is evolving rapidly but unfortunately there's still not great acceptance for farming software and automated systems in Australia, at least not among smaller to mid-sized private farms.

"In America the uptake has certainly been far greater. You only have to look at the efficiency of labour usage. For example the of litres of milk produced per unit of labour in the USA, which is about four times what we can achieve.

"It seems to boil down to the farmers' lack of understanding and a distrust of where the technology is coming from. Farmers often think very operationally so it's very hard to look at things strategically. Also, the ageing farmers tend to be less comfortable with new technology." He said his research showed that larger corporate farms tended to be more open to new technology.

> Kerr said the purpose of the US e US National

Dr

collaboration, funded by the US National Science Foundation, was to gather experts from a range of fields to discuss the problem from all angles.

"My area of expertise is in the development and evaluation of decision support systems, which means technology that is helping people make more informed choices," he said. The group will also be discussing job displacement caused by automation, an ageing population of farmers, health and safety matters, technology development, sustainability, education for succession planning and farmer outreach and training.

"We want to provide all the mechanisms to embed the new generation of technology in farming communities through a

participatory approach," Dr Kerr said.

He said technology had the potential to greatly improve farming yields, efficiency, finances and even help farmers plan and manage more effectively for drought.

"There are predictive models for rain that can help us plan

long-term for future droughts. If farmers could become more prepared using those systems, it would really help," he said.

For all the technology and automation, though, he says there will still be a need for farmers.

"Someone actually has to have the knowledge of when to harvest. All the automation that is happening in the world today just means people are having to adapt to the machinery that is becoming available and learn how it can benefit their farming."



THE INSTITUTE OF FORESTERS OF AUSTRALIA

26 March 2018

Media release

How cities benefit from a healthy forest

Reviewing a recent FOI request in WA for a 2013 document gave an insight into how the Institute has, for some time, been driving governments to adopt forest management practices that lead to better environmental outcomes.

National President of the Institute of Foresters of Australia, Mr Bob Gordon said, 'In 2013 the Institute recommended a program to thin some 65 000 hectares of high-rainfall jarrah catchment forest, a recommendation which was subsequently included in the Conservation Commission's draft *Forest Management Plan* 2014-2023.

'However, the proposal - <u>available on the Institute's website</u> - to thin forest (*silviculture for water production*) is unfunded.

'Considerable thinning has been done on a trial basis, with promising results, and while the science is sound, practicalities of how and when the thinning occurs will affect the water yield outcomes - but the positive impact is obvious.

'Improved forest management will enhance biodiversity and improve stream and forest health, and potentially save the State several million dollars each year.

'While water - particularly affordable water – has long been a contentious issue in Perth; climate change is likely to make this issue even more prominent.

'Solutions such as desalination and waste water recovery have their part to play, but actively managing catchments reaps the biggest dividend in biodiversity, forest health and cheap, clean drinking water.

'Forests and Sustainable Cities' was the theme for International Forests Day in 2018 and later this year, the Institute of Foresters of Australia and the Australian Forest Growers are holding a combined conference in Canberra called: **Forests for healthy cities, farms and people.**

'From 2-5 September international and local experts will speak about the increasing importance of catchments and urban forests to our growing cities, the continuing importance of trees on farms, and the links between healthy tree-scapes and healthy people', said Bob.

More information about the conference is at <u>https://forestry.org.au/ifa/about-the-conference</u>

Media contact: Bob Gordon, (02) 6153 3044

Images: <u>https://www.dropbox.com/sh/0yram8ae0pmi2ra/AACO8qwcSTfNRIEkHAHE7W0pa?dl=0</u> **Australia's professional body for foresters and other forestry professionals** admin@forestry.org.au www.forestry.org.au

PNG University of Technology Forestry Training Program

Dr Frans Arentz

The PNG University of Technology (Unitech) offers four year degree and three year diploma courses in Forestry at its two campuses in Lae and Bulolo. In order to ensure that all courses taught at Unitech are of an international standard, the University has embarked on a program of external evaluation of these courses. I recently completed the first evaluation of the Forestry program.

The forestry curriculum for both degree and diploma programs is comprehensive, with many of the traditional forestry subjects such as silviculture, ecology, mensuration, utilisation, forest engineering and management being offered as well as new subjects (at least since my day as an undergraduate) such as climate change. All students have to complete a structured industrial work placement in the third year of their program.

The biggest issue for both staff and students is the availability of teaching resources, particularly access to the Internet, an issue that is being addressed by the University. However, lecturing staff asked whether Australian foresters could help through donations of forestry text books and journals which they no longer need.

If you are able to assist with any donations, please contact me at <u>arentz@activ8</u>. <u>net.au</u>.

No toxins, no waste and no WIRE: Breast cancer survivor launches eco bras made from sustainably-farmed Eucalyptus trees and natural fibres



When Stephanie Devine was diagnosed with breast cancer 10 years ago, she found herself struggling to find a bra to suit her needs. 'I was unable to find a cotton-lined, non-wired bra in my cup size that wasn't a maternity bra, to get me through chemo,' Stephanie, from Sydney, told FEMAIL. Since that point, she confessed she's been 'obsessed' with making 'the perfect non-wired bra in natural fibres'. The result is The Very Good Bra, whose slogan is 'no wire, no toxins, no waste'. The product will launch in April and is made from sustainably-farmed Eucalyptus trees and natural fibres.

Speaking to FEMAIL about the need for the bra, Stephanie confessed she has always been interested in the 'buy less, buy better' movement. However, this reached a high point when she was diagnosed with breast cancer and wanted something toxin-free for her recovery: 'I spent four years working on a non-wired bra,' she said. 'The more I've

learned about materials, the more I've had to re-calibrate my thinking in terms of what is "good". Once you discover that it takes 20,000 litres of water to produce a kilogram of cotton, organic or not, it really gets you thinking. When you realise that apparel is the second-largest polluting industry in the world behind oil and gas, and that 40 per cent of landfill is clothing, you realise that if things are going to change, you need to do your bit.' She spent the past 18 months developing The Very Good Bra as a result.

\The Very Good Bra is made from a botanic fibre called Tencel, which comes from sustainably-farmed Eucalyptus trees: 'They require minimal water for growth and processing,' Stephanie explained. 'The tencel is knitted and organically dyed in Melbourne. We have tree-rubber and elastic sourced from sustainably-managed plantations, which is then knitted into organic cotton to make strap elastic, and our metals are cadmium and nickel free.' But while the entrepreneur is proud of her creation, she said it's just a 'drop in the ocean'. Though she is not advocating 'zero-waste wardrobes', Stephanie said she is trying to 'raise public awareness about waste and landfill'.'People need to think harder about their buying choices,' she added. 'Buy less and buy better.'

Read more: <u>http://www.dailymail.co.uk/femail/article-5547171/Breast-cancer-survivor-launches-zero-waste-</u> bras-natural-fibres.html

Eucalyptus used to produce sustainable sneakers

US-based sustainable sneaker brand Allbirds sources one of its core materials from South Africa. The Allbirds running shoes launched last week, Tree Runners, features an upper made from eucalyptus from South African farms. "This fibre is one of the most sustainable materials on the planet," said Joey Zwill-inger, co-founder of the company, speaking to the New Yorker. The eucalyptus is farmed locally, using no irrigation. Allbirds dissolves the wood pulp in a non-toxic bath to convert it into tufts of fibre called Tencel.

"Our tree fibre—TENCEL[™] Lyocell—is sourced from South African farms that minimise fertiliser and rely on rainfall, not irrigation," the company says on its website. "Compared to traditional materials like cotton, it uses 95% less water and cuts our carbon footprint in half."

Allbirds is Forest Stewardship Council (FSC) certified, the body responsible for responsible forest management. "FSC ensures that we're not only protecting forests, but the people, wildlife, and ecosystems

that depend on them." Other parts of the Tree Runner is also sustainable: the laces are made from recycled plastic bottles, the insole is made from caster beans, and the eyelets are based on plant starch.

According to the South African National Biodiversity Institute (SANBI), eucalyptus is a diverse genus of flowering trees and shrubs belonging to the myrtle family Myrtaceae. It is not indigenous to South Africa. "Outside their natural ranges, eucalypts are both lauded for their beneficial economic impact and criticised for being 'water-guzzling' invasive aliens, leading to controversy over their total impact," says SANBI.



Media Release



Monday 7 May 2018

Locking up more NSW forests won't help koalas

The peak industry groups representing NSW's timber and forest products industries slammed the NSW Government's announcement today to lock up more State Forest, with no evidence that it will lead to better conservation outcomes for koalas and without consulting with industry.

Timber NSW and the Australian Forest Products Association (AFPA) said that while Australia's forest industries are committed to koala conservation, we need evidence-based decisions that recognise the vital role that our production forests play in the sustainable management of our forests, including the forest industries' considerable investment in conservation, bushfire mitigation and recreational amenities.

Timber NSW and AFPA are also demanding answers on how today's announcement will impact on future wood supply for the industry, and what the Premier means when she says that the 24,538 hectares are just a starting point.

Timber NSW General Manager, Ms Maree McCaskill, said today's announcement undermined the work of the NSW Forest Industries Taskforce and the <u>NSW Forestry Industry Roadmap</u>, which promised a more consultative, evidence-based approach to forest policy. The Taskforce has not been convened for almost 6 months (the last meeting was on 24 November 2017).

"With 90 per cent of NSW's forests in National Parks and Reserves (80 per cent, or almost 6 million hectares) or in State Forest Reserves and protected areas (10 per cent, or about 1 million hectares), and just 1-3% per cent selectively harvested each year and then regenerated as required by law, we should be demanding to know why our extensive reserves system is failing," Ms McCaskill said.

"The NSW Government continues to ignore the single biggest message from industry that we cannot sustain any further reduction in production forest. Above all else we need resource security and policy stability to drive the investment decisions that will allow our industry to innovate and grow," Ms McCaskill concluded.

AFPA Chief Executive Officer, Mr Ross Hampton, said NSW's State Forests provide a sustainable resource that not only supports thousands of jobs directly and tens of thousands more in downstream industries, but also generates beautiful appearance grade timbers that Australians love.

"Australia has an annual trade deficit of more than \$2 billion in wood products because domestic demand continually outstrips supply," Mr Hampton said.

"The NSW Government must recognise that any reduction in Australia's world class forest industry will increase imports of hardwood timber from countries with weaker environmental regulations, including those where tropical rainforests are logged unsustainably and illegally," Mr Hampton concluded.

AFPA represents forest growers, harvesters, and manufacturers of timber and paper products. **Media Contact: Joe Prevedello** AFPA Communications Manager (m) 0497 497 005 (e) joe.prevedello@ausfpa.com.au or Maree McCaskill 0418 657 453

http://www.destinyman.com/2018/03/22/local-eucalyptus-used-produce-sustainable-sneakers/

Indigenous forest-based livelihoods and bauxite mining: A case-study of the Weipa-Aurukun region, Northern Australia.

Mark Annandale¹ and John Meadow:

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Keywords: Agroforestry; ecosystem restoration; Indigenous community forestry; mine-site rehabilitation; multiple-use forests; salvage harvesting

BACKGROUND:

Bauxite mining operations are increasingly sited on Indigenousowned land, particularly in tropical areas including Northern Australia. The environmental impacts of bauxite mining are profound. A mine-site's native vegetation cover is cleared and commercially valuable forest resources are typically windrowed and burnt. For Australian Indigenous landowners, the mining activity creates much concern about cultural, community health and livelihood impacts associated with the loss of traditional resources and the ability to 'care for country'. Improved premining resource utilisation and effective mine-site rehabilitation are key areas of Indigenous community concern about bauxite mining projects on their country.

Past mine-site rehabilitation attempts to restore forest cover including native forest ecosystems and to support Indigenous business and employment have had mixed outcomes. This paper explores the potential to improve outcomes in these areas by integrating Indigenous community forestry into bauxite mine management and rehabilitation.

METHOD:

Through a qualitative case-study, we investigate the opportunities and challenges for incorporating pre-mining forest product salvage harvesting and multiple-use mine-site rehabilitation into the whole-of-life of bauxite mining projects in the Weipa-Aurukun region in North Queensland, Australia. In this context, we review previous natural and cultural resource development initiatives implemented as part of the management and rehabilitation of bauxite mines, and the processes and outcomes of Indigenous community consultation to determine a multi-purpose pre- and post-mining land-use vision for bauxite mine-sites

OUTCOMES:

We present insights into an Indigenous community's sustainable forest-based livelihood strategy associated with bauxite mine-sites. The findings can inform policymakers and mining industry professionals in the design and implementation of mine-site relinquishment criteria and associated pre- and post-mining management plans and strategies that will generate improved environmental and socio-cultural benefits for impacted Indigenous communities.

"Ironwood, stringybark, soapy leaf tree and Henry Kelinda (Wik-Waya)





"We want to see the timber harvested before the

wasted and burnt. We would like to see a timber mill in

Aurukun so that local people have jobs" - Reggie Miller





We also acknowledge the Advance Queensland Innovation Fund for supporting this research

Tropical Forests and People Research Centre

The Archer River Catchment Ecosystem **Services Project**

Mark Annandale^{1*}, Gina Castelaine^{1,3}, Luke Preece², Natalie Stoeckl¹ and John Meadows¹ Tropical Forests & People Research Centre. University of the Sunshine Coast ²The Nature Conservancy, Cairns 3Wik Projects Ltd., Cairns. Project Leader Man



BACKGROUND: Ecosystem services refer to the many benefits that communities obtain from healthy, functioning ecosystems. The traditional land management practices of Indigenous peoples are recognised as maintaining and enhancing ecosystem services. 'Payment for environmental services' (PES) markets provide opportunities for Indigenous communities to receive financial payments for implementing practices that maintain and enhance ecosystem services.



THE RESEARCH CONTEXT: Cape York Peninsula

in Far North Queensland is a region of global conservation

possess knowledge and skills to manage their country and

a deep cultural connection to place. This includes the Wik,

Wik-Waya and Kugu people whose homelands extend over 23.000 km² surrounding the town of Aurukun. The

overcome a history of disadvantage and the significant

barriers to improving their capacity for sustainable land

management. Much of their country is remote and has

management compared to most of southern Australia.

had little investment in natural and cultural resource

Wik, Wik-Waya and Kugu people need support to

significance. The region's Indigenous Traditional Owners











METHOD: This project uses desk-top and field-based research to investigate the potential for the Wik, Wik-Waya and Kugu people to receive PES for their traditional

land management practices in the Archer River catchment. This river catchment has immense conservation value and is a critically important cultural and livelihood resource for the Wik. Wik-Wava and Kugu people. The focus is on PES options associated with traditional burning, waterway and other hydrological systems management, and community health and wellbeing.





FLUSC

Acknowledgements:

country.

Consultation for the Indigenous Protected Area Management Plan has informed this research. We thank the Wik Peoples for the opportunity to work on their

Tropical Forests and People Research Centre









Cyclone Alby

Cyclone Alby – memories Of the 1978 Western Australian storm and bushfire crisis is now published and available for purchase.

Please note that although my name is on the cover, it is a Bushfire Front publication, and the aim is for all proceeds to go to our campaign to get bushfire management in WA back on the rails.

Nevertheless, it is an interesting book. The anatomy of the storm is described, and the state of preparedness analysed. The devastating consequences are set out, and at the end I have asked the key question "What if?" What if another Cyclone Alby strikes southern WA – how will we fare?

But the heart of the book is nearly 100 first-person memoirs collected from people who were there at the time: the firefighters, farmers, foresters, ambos, nurses, school bus drivers, policemen, timber workers, orchardists, fishermen, wives and children. The stories are dramatic and exciting, often heart-breaking and poignant, even in one or two instances humorous. They speak of the courage, resilience, toughness and selflessness of rural West Australians. You will feel proud to read these stories and you will recognise many of the people who wrote them.

The book has a number of lessons. Although in 1978 we were well-prepared in many ways for a bushfire crisis, we were not expecting bushfires driven by cyclonic winds over many hours, or a fire ground that encompassed the entire southwest and most of the Great Southern. Wonderful work was done, and on the whole, systems held up. But tactical errors were made and over the intervening years many of the lessons learned from Cyclone Alby need to be relearned. We hope that the State's bushfire authorities also read the book, and take notes.

\$35 +\$5 postage

Cheques made out to The Bushfire Front Inc

Or bank transfer to Bushfire Front BSB: 306 044 Account No: 034 139 7 Please add Cyclone Alby and your name as reference Return order form to Roger Underwood at 7 Palin Street, PALMYRA WA 6157 or by email to yorkgum@westnet.com.au

CYCLONE ALBY

Memories of the 1978 Western Australian storm and bushfire crisis



by Roger Underwood



The AIF Forestry Unit served in Scotland and England for three-and-a-half years during World War II, cutting millions of feet of timber used in the production of bombers and patrol boats. Sapper A.F. Hobbs from Queensland and Sapper W.H. Gould from Sydney are pictured here shaving with their axes. (State Library of Victoria/Flickr)

ANZAC DAY 2018 - AIF Forestry Units remembered in the Melbourne parade

ANZAC Forestry

Oliver Raymond

If you watched a record of the ANZAC march in Melbourne last Wednesday, you would have seen the inheritors of the three WWII Forestry Company Warriors parading in the annual ANZAC day march – and carrying the Forestry Companies' memorial banner in their honour.

91 Forestry Squadron, Royal Australian Engineers, carried on the WW II forestry military tradition for many years,

in the Australian Citizens' Military Forces and the Army Reserve.

The Australian Army was so enamored of the need to have a military unit capable of producing essential timber remote from the homeland and close to the front, that they commissioned a Tasmanian company to produce two mobile sawmills capable of being broken down and fitted into two Hercules Transport aircraft. Consisting of a 60 inch, twin Canadian breaking down bench, a breast bench and a docking saw, the mill used electric motors powered by a diesel gen set. The Army had numerous such gen sets for many different uses.

91 Forestry Squadron has now been removed from the Order of Battle, and the mills are no longer. But for many years the Unit demonstrated the use of these mills to bemused Regular Army Engineers, who had no idea of the skills the Regular Army lacked. Over the years, three Foresters at various times commanded 91 Forestry Squadron.

Major Ben Benalleck, who commanded one of the Forestry Companies in WWII, initially led the Unit. Major Don Anderson, an Engineer in the Forests Commission, Victoria, followed him. Captain Rod Incoll, a Forester, briefly succeeded him, followed by Major Les Malseed, a professional engineer, Major Oliver Raymond (a Forester) and then Major (later Lt Colonel) Rob Youl, a graduate of the Officer Training Unit, Scheyville, of National Service fame in the Vietnam era, and also a Forester.

Both Major Raymond and Lt. Col.Youl took part in the march on Wednesday, as they both have for many years past.

It is a proud tradition, and as long as ex members of 91 Forestry Squadron prove capable of carrying the banner commemorating the service of the WWII Forestry Companies, the tradition will live on.

Obituary- Bob Ellis PhD

Ken Felton

Bob Ellis, a leader in the Institute, a field based researcher in native forests and an advocate for their active management, died earlier this year. He had a strong personality with a hearty and direct manner, was President of the Institute for four years from 1987 to 1991, and was elected a Fellow in 1995.

In 1996 he was honoured with 'The Jolly Medal', the citation noting his more than 35 publications in Canada and Australia and that "his ability to discuss and communicate forestry issues with a wide range of audiences enabled Bob to have had a significant impact on forestry practices and improve the standing of the forestry profession in Tasmania".

He grew up in the United Kingdom, and after National Service in the Royal Air Force became an undergraduate in the Forestry Department of the University College of North Wales, Bangor, receiving an Honours Degree in 1954. He moved to eastern Canada, making post-graduate studies with a Fellowship from the University of New Brunswick, which granted him a M.Sc degree, and working in Newfoundland for the Forest Service of Canada studying regeneration after clear falling in spruce/fir native forests.

Emigrating to Australia in 1961 he became a Silvicultural Research Officer with the Forestry Commission of Tasmania. He was involved in a variety of native forest projects and made a major study of a widespread condition in virgin mature stands of Eucalyptus delegatensis, known as 'High Altitude Dieback', affected stands being characterised by their eucalypts being dead or with declining crowns, standing over a dense woody understorey of non-eucalypt species. The condition was thought of as a malady, but no destructive agency was known. After extensive field work Bob showed associations of increasing decline and death with time since the last fire and increasing altitude; the delegatensis had established after a very hot fire, accompanied by species that formed a short open understorey, which, with time, had been overtaken by rainforest species which grew to form a dense understorey, markedly lowering soil temperatures. Decline and death of the eucalypts was attributed to an inability to change their root to crown ratios to accommodate the changes in soil microclimate, death being a consequence of changes in competitive ability over time in other words.

Bob became a Doctor of Philosophy of the University of Melbourne in 1967, his thesis being titled "Some factors effecting the differentiation of forest soils in Southern Victoria". Returning to eastern Canada he continued studies of native forests for a decade before returning to Australia, having been appointed by the CSIRO as a researcher in Hobart in 1978.

At that time there was a controversy over the importance of the loss of inorganic nutrients in the intense burns used in the regeneration of eucalypt forests after logging. Bob worked on the nutrient status of soils of the high quality forests in southern Tasmania in higher rainfall areas, which have a strong ability to retain nutrients released by fires. Measurement showed that the nutrients lost from the site after the fires were a small proportion of the total remaining, and would be soon replaced by inputs from weathering and in rainfall.

Bob's work in less productive forests of drier areas of Tasmania was notable for showing private property owners how to implement irregular silvicultural systems in uneven-aged stands.

I have described three particularly valuable undertakings carried out by Bob Ellis when he was in Australia, which show a silviculturist motivated by a strong desire to gain knowledge and apply it to forest management. It is fit that he has been commemorated by a growing tree in the Foresters Grove at Albury. IFA National President Bob Gordon AFG President Kevin Harding

IFA Chief Executive Officer Sarah Paradice

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