

# NMMU/SAIF Fire Management Symposium



By Braam du Preez and Lee Raath-Brownie

The Nelson Mandela Metropolitan University (NMMU) and the Southern African Institute of Forestry held its annual Fire Management Symposium in September 2014. This year was the 10th anniversary of the popular industry seminar and was held over a two-day period at NMMU's George campus (Saasveld) in George, South Africa.

The 2014 fire symposium presented a diversity of speakers covering a variety of topics and created an opportunity for people involved with/working with fire as a management tool or from post disaster point of view to get together.

Professor Quinton Johnson, principal of NMMU George Campus, welcomed everybody and reminded attendees of how the early people, some 162 000 years ago, used fire in their daily lives redefining modern history to make tools using fire. Professor Johnson mentioned the big fire of 1869 and its major implications.

Ian Henderson appealed for practical approach and said, "We must be

able to apply what we propose." Henderson told a few stories of his part in two recent fires and reminded all of the fast moving devastating fire causing havoc in KwaZulu-Natal as opposed to equally big fire slowly progressing in largely inaccessible area with limited loss.

Other speakers included Tineke Kraaij of SANParks who discussed fire regimes in Fynbos: drivers and ecological requirements. Her presentation included the recent fire regimes in the floral kingdom and its frequency. Kraaij highlighted the fact that attempts to manage fuel load in prevention wasn't a fool proof preventative solution. Prof Brian van Wilgen detailed the trade-offs in fire management between safety and ecological good health and presented an overview of the fire prone biomes in South Africa. Prof Van Wilgen cautioned that the research being done isn't getting through to the fire managers and said that the increase in CO2 levels is driving bush encroachment. Dr Christo Marais discussed the economic consequences of sustainable fire management regimes and detailed

the successes of the Working on Fire program and said, "You cannot think of alien invasive species management without thinking of fire management." Peter Harmse's presentation 'Air pollution Act – smoke permits needed?' raised considerations from air pollution health and safety, which fire managers ▶



Professor Quinton Johnson, principal of NMMU George Campus

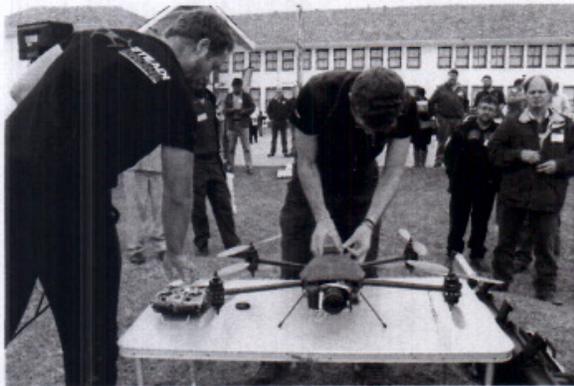
## NMMU/SAIF Fire Management Symposium



Speakers on the first day of the symposium



Speakers on the second day of the symposium



The Steadidrone demonstration



The Southern Cape Fire Protection Association team

- ▶ do not usually take into account. Harmse said that guidelines should be developed for open burning.

Henry Cunningham of SANParks discussed 'Fire and invasive plants—the end?' and said in managing invasive alien plants (IAPs), synchronising burning and alien clearing is imperative and that the timing of the burn is crucial; right season, right intensity. Climate change and how it changes fire management was the topic of James Thobela, a post graduate NMMU students' presentation. A very interesting animation of temperatures ranging from 1884 to 2012 indicated that the climate is changing and average recorded temperatures are increasing with indications that dry areas get drier and wet areas get wetter. Thobela concluded in saying that fire managers need to change their thinking to adapt to the changing environment. Harvesting and fire management was Warren Williams of Cape Pine's topic of discussion. Williams highlighted the importance of including integrated fire management plans when planning

roads and harvesting operations and said that fire management is everybody's business.

Luke Radebe of Department of Forestry and Fisheries' presentation was on the National Veld and Forest Fire Amendment Bill, where are we now? Luke said that the original act promulgated in 1998 had certain shortcomings, which were part addressed with amendments made in 2001 and 2005.

Further amendments proposed include addressing state land, traditional leaders, municipal land and a definition of veldfires (wildfires), which will make the Act more effective. The changes have been endorsed by executive committee (EXCO) on 18 August 2014 and will be submitted to parliament shortly.

Steadidrone's Duran de Villiers presented the use of fire drones as an eye in the sky which was followed by an interesting demonstration of the drones, which were developed by Steadidrone based in the Southern

Cape's abilities. Paul Gerber of the Southern Cape Fire Protection Association (SCFPA) gave an overview of the SCFPA, its history, progress, successes and the way forward and said that the key to success of the FPA is partnerships; working together.

Len du Plessis of SANParks' presentation, 'Adaptive interference fire management system: Tsitsikamma – management challenges' zoomed in on a practical application of fire management balancing ecological/biodiversity needs with risks to assets. Du Plessis detailed three models/approaches namely: block burning, adaptive interference fire management and natural fire zone management. SANParks opted for the adaptive interference fire management system (AIFM) approach and further refined the model by bringing scientific applications and managed execution together to make it practical. The carbon/fire relationship was discussed by Richard Payne, a post graduate NMMU student, who explained why carbon emissions mattered and



Vanguard's John Buchan and Stuart Wood



Dr Jaap Steenkamp of Cape Fire and Chemical and his team

highlighted nutrient recycling and climate change perspectives.

Dr Andries Jordaan of University of the Free State (UFS) DimTec discussed 'Wildfire risk assessment and challenges for implementation and looked at it from a disaster management perspective.

Dr Jordaan detailed the four key performance areas (KPA's) of disaster management and said that disaster risk reduction and response goes hand-in-hand. He added that it is essential to have a pre-approved contingency plan that included all role players. He also covered the reasons for a risk assessment and emphasised the changing role of the media. Malcolm Procter debated 'Who is really in charge at wildfire events? Procter quoted legislation and detailed the responsibility of each role player. He reviewed a recent major fire in the Free State where various organisations and people did not comply with legislation and detailed the impact of this.

Cape Town University of Technology's Leanne McKrill presented 'Where there's smoke there's an awareness campaign. Reflections, lessons learnt and suggestions for future campaigns' in which she covered the topic of fire awareness from her previous involvement with, amongst others, the Firewise project. She discussed the generic approach and fact that we

tend to work in silos, duplicate and that the right message doesn't often reach the target audience. She identified keys to a successful campaign: the need to be creative, open to new ideas and community specific. Prescribed burning and site sustainability was the topic of Thomas Volontiya of Bedrock Forestry's presentation in which he alerted to the fact that managers might actually miss the mark despite good intentions by not considering all the potential negative impacts of prescribed burning on site sustainability. He highlighted the implications to consider the effects of prescribed burning on site sustainability including nutrient states/structure, soil moisture and micro-organisms. Volontiya

concluded in saying prescribed burning should enhance tree growth, not the opposite and that the decision to burn must be site-specific.

Zane Erasmus discussed managing wildfires in the urban interface and emphasised the importance of an integrated fire management plan, highlighting the three main areas of focus ie the prevention plan; the protection plan and the response plan. Erasmus defined the urban interface and described the types of urban interfaces. "It is really all about partnerships," said Erasmus. Western Cape Government's Rodney Eksteen talked about 'Community risk reduction: strategic and tactical ▶



Steadidrone viewer

## MANAGEMENT TRAINING ATION CENTRE for Africa



Dr Andries du Toit and Germie van Copenhagen of UFS Dimtec



Working on Fire demonstration



Johan Heine, Llewellyn Pillay, Winston Smith and Trevor Abrahams

considerations to promote community safety', alerting to the alarming monthly death statistics in South Africa resulting from fires and the cost implication to survivors. Eksteen presented evidence-based strategies for community risk reduction and intervention and discussed the risk pyramid, saying that the message content and construction must be action orientated.

Kishugu Group's Johan Heine shared an overview and the history of international aerial fire fighting.

Heine has over 30 years of aerial fire fighting experience and said that although the initial attack timeline is of the utmost importance, air support is not the be all and end all of fire fighting. He added that South Africa has advanced greatly in integrated fire management and effective use of aircraft in fire fighting. He covered the history, which started way back in 1954 and advancement over the last 60 years, which included the formation of Working on Fire in 2008. Heine highlighted that ground support and logistics were critical and eluded to the Western Cape example of excellence for optimal use of aerial quick response; the timeline from detection to first drop.

Tessa Olivier summarised the Global Environment Facility's Fynbos Fire Project - reducing disaster risks from wildfire hazards associated with climate change. She said that this comprehensive three-year project had three main focus areas:

- Strengthening of FPA's including training and communication
- Improved decision-support and risk management systems for fire management; analyse information and data eg: weather stations and the Advanced Fire Information System (AFIS). Future scenarios.
- Implement innovative risk reductions interventions

Olivier questioned climate change: how can we adapt to an uncertain future?

Braam du Preez of Cape Pine summarised the conference and Tiaan Pool closed with a big thank you to all the sponsors and people behind the scenes that made the 10th NMMU/SAIF Fire Management Symposium a success. ▲