

FIRE AND RESCUE INTERNATIONAL

Integrated fire management and rescue technology

Volume 1 No 1



FFA GROUP OF COMPANIES
FIRST IN INTEGRATED FIRE MANAGEMENT



Pride | Humility | Respect | Strength | Honour | Brotherhood | Bravery

We dedicate all of the above words to you...

THE FIRE FIGHTER!

The words "We run into buildings when everyone runs out" says it all. We are proud to launch our new company and we are even prouder to serve you, our fire fighters. In the coming months we will not only advertise our products and services but we will also actively seek out interesting and informative news and information to publish. As our name suggests our focus will be where the need is the greatest – the rural areas, not only in South Africa, but also Africa.



Member of the FFA Group of Companies

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Comment

Fire and Rescue International. It's all in the name. This newly launched magazine will be serving the fire fighting fraternity and honouring their dedication and bravery.



Lee Raath-Brownie

Aimed at arming fire fighters with tools to make their work safer, assist them in faster attack of fires and supplying them with information on all aspects of their professions.

The magazine will publish information on the latest developments in fire fighting including integrated fire management, fire fighting technology, training, fire and weather news, vehicles, products and related services. All aspects of fire fighting will be covered on a monthly basis including veld, forest, farm, parks, industrial, structural etc.

We are also introducing a photographic competition to involve our readers in capturing their visual experiences on film (or memory card!). See page 3 for full details.

The movie, Australia heralded that every person has a "story". Whether you are an office worker, a jet-setting executive, a tradesman, a business owner or in the services industry, you have very special "story" to tell in life. Some people's stories are good, interesting, boring, exciting, gentle or humanistic and others are heart wrenching, scary, and remarkable. We invite you to submit your special fire related story. It might have happened to you personally or maybe you were a witness of a remarkable event. Share it with us so we can share it with our readers.

We will be publishing a poem on a monthly basis as part of our motto to honour our fire fighters. You are similarly invited to submit a poem for publishing. We will acknowledge the writer in the magazine.

This month's poem was submitted by an anonymous fire fighter.

A fire fighter's pledge

I promise concern for others.
A willingness to help all those in need.
Promise courage - courage to face and conquer my fears.
Courage to share and endure the ordeal of those who need me.
I promise strength - strength of heart to bear
whatever burdens might be placed upon me.
Strength of body to deliver to safety
all those placed within my care.
I promise the wisdom to lead,
the compassion to comfort,
and the love to serve unselfishly
whenever I am called.

Anonymous

Thank you to all who made this edition possible. We trust you will enjoy the magazine and find its content informative and of use.

Lee Raath-Brownie

Publisher

Calling all budding photographers!

We want your photographs!



Fire and Rescue International (FRI) is introducing a monthly photographic competition to all its readers. This exciting competition offers you the opportunity of submitting your digital images of fires and fire fighters, any fire, anywhere.

The rules are simple:

- All photographs submitted must be in jpeg format and not bigger than 4 megabytes.
- Photographs must be in high resolution (minimum 1500 pixels on the longest edge @ 300dpi) for publishing purposes
- **Allowed:** cropping, curves, levels, colour saturation, contrast, brightness, sharpening but the faithful representation of a natural form, behaviour or phenomenon must be maintained.
- **Not allowed:** cloning, merging/photo stitching, layering of two photos into one final frame, special effects digital filters.
- Fire and Rescue International (FRI) reserves the right to publish (printed or digitally) submitted photographs with acknowledgement to the photographer.
- Winners will be chosen on the merit of their photograph.
- The judge's decision is final and no correspondence will be entered into afterwards.
- Brief description should accompany photo.

Entries must include:

Name of photographer
Contact details (not for publishing)
Email: (not for publishing)
Name of photograph
Brief description of photograph including type of fire
Camera used
Lens
Settings

All entries must be emailed to lee@fireandrescue.co.za.

>>ENTER NOW!

The FFA Group of Companies

The FFA Group is Southern Africa's leading supplier of integrated fire management services (IFMS).



Mpumalanga experienced devastating fires in 2007

Its key objectives are to make a range of resources available to landowners, fire protection associations (FPAs), conservation agencies, government departments, parastatals and the agricultural and private sector to help manage, prevent, and suppress unwanted wildfires.

The FFA Group arose out of the formation of the Forest Fire Association (FFA) — a section 21 company — in 1986, to provide aerial fire fighting services to the forestry industry in Mpumalanga.

In 2003, the Forest Fire Association won a South African National Government tender to implement Working on Fire (WoF), a national poverty relief and job creation programme. The WoF programme has subsequently become the most successful job creation and poverty relief programme in South Africa's history.

FFA Aviation

The immense successes of the programme lead to the expansion of the FFA into a group of companies that provide a range of wildfire management services and resources. One of these companies is FFA

Aviation which is South Africa's leading provider of aircraft for fire and rescue services. This highly advanced company boasts an expansive fleet of 12 Huey UH1 helicopters — with access to additional six Huey UH1 helicopters — six fixed-wing water bombers with access to additional seven fixed wing water bombers and three spotter aircraft with access to additional 12 spotter aircraft.

FFA Aviation employs, full time or on contract, the most experienced fire fighting and rescue pilots in Southern Africa and boasts one of the best safety records in the world for this type of flying. FFA Aviation's aircraft are maintained by the FFA Group's Aircraft Maintenance Organisation (AMO), thus ensuring that aircraft are maintained at a very high standard with an excellent availability rate and remain Civil Aviation Authority (CAA) compliant.

The FFA also offers its own professionally operated dispatch and coordination service with well-established centres in all the provinces in South Africa. Highly skilled operators at these centres coordinate the deployment of aerial

and ground resources during fire fighting or rescue operations.

Working on Fire

Through Working on Fire (WoF), the FFA has trained more than 3000 formerly unskilled, mainly rural people to become skilled wildfire fighters.

This multi-million-rand job creation programme, has won a number of prestigious awards. Through the programme unemployed, usually unskilled people, are recruited and trained in fire awareness prevention and fire suppression skills. Career paths are clearly defined allowing previously unskilled people to rise through the ranks to become crew leaders, trainers, base managers, or to apply for any number of senior management posts.

Once trained, the fire fighters are deployed in crews of 18 to 25 and posted to bases throughout the country and as close to their homes as possible.

There are two main fire seasons in South Africa: the Cape's season is mainly during the summer months, ▶



FFA Aviation employs the most experienced fire fighting and rescue pilots in Southern Africa



Future fire fighters being addressed at a preschool.

► and the rest of the country's fire season falls during the winter (no rainfall) months. When not fighting fires, the Hot Shotteams, as they are casually known as, are deployed to perform fire prevention activities, conduct outreach programmes in local communities or otherwise engaged in development projects.

During serious or extended fires and when local human resources are exhausted, FFA and WoF teams are mobilised — like a reserve army — from all over South Africa to assist.

Fire management strategies

In pioneering their integrated fire management service, (IFMS), the FFA Group has developed extensive fire management strategies. These include assessments of ecological conditions, fuel load, land management objectives and community involvement.

Recently, the Group broadened its service delivery to include the supply of hardy, multi-purpose

buses to transport fire fighters as well as fire trucks, skid units, trailers and fire fighting equipment to rural municipalities.

After the devastating fires in Mpumalanga in 2007, the FFA identified a shortfall in municipal capacity to fight structural fires. Under the WoF programme, a pilot project was developed to train 72 of its most experienced wildland fire fighters in structural fire fighting skills. This innovative project proved to be such a huge success that it has been expanded and is currently being rolled out nationally.

Acting as a public benefit organisation within the FFA Group of companies, FFA Section 21 undertakes and implements fundraising functions for the Group. The FFA Group intends to continue to lead through expertise and innovation and by setting new standards in all aspects of wildfire management with the aim of becoming the premier resource of integrated fire management strategies internationally. ▲



The Working on Fire Programme actively relieves poverty through job creation



South Africa to host international fire conference

Wildfire 2011 will be held at Sun City from 9 to 13 May this year

Scientists, fire management experts and government policymakers from countries around the world will gather at Sun City in May this year for the hottest event on the international fire fighting calendar.

The Fifth International Wildland Fire Conference will take place from May 9 – 13, 2011. The theme is “Living with Fire – addressing global change through integrated fire management.”

Wildfire 2011 will be held under the auspices of the United Nations' International Strategy for Disaster Reduction and the Food and Agricultural Organisation.

Topics that will be discussed at the conference include adapting to climate change in a post-Kyoto protocol period; the mega-fire phenomenon; cutting-edge technologies in fire detection, monitoring and fighting; how fire management programmes can help alleviate poverty in South Africa and elsewhere; how communities in many countries are preventing and

fighting fires that would otherwise cause devastation, and the progress made in drawing up international agreements and guidelines for managing wildfires.

Pre-conference workshops are arranged, covering Firewise Communities trainer sessions as well as sub-Saharan regional network meetings. Delegates will also be treated to a taste of the real Africa, as a field demonstration day in the adjoining Pilansberg National Park is on the programme.

The conference is organised by AfriFireNet, the sub-Saharan wildland fire network and sponsored by the South African government, the United States Forestry Service amongst others.

“We are honoured that South Africa was chosen to host this conference, where issues of global significance will be discussed,” said conference spokeswoman Val Charlton.

“Pro-active management of fire-prone environments is becoming more and more important. Human

settlement and development is increasingly intermeshing with the natural environment.

The issue of using fire wisely as a tool, to reduce fire hazards at the landscape level, has become necessary globally. Mega fires such as recently experienced in Russia, Europe and Australia not only cause deaths and personal losses, but cost the world's governments and businesses billions of dollars in fire suppression, damages and recovery aid.

“No single country has sufficient fire fighting resources at its disposal to deal with massive fires. This makes international co-operation a critical component of modern day fire fighting readiness.

“Wildfire 2011 brings together all the main fire fighting agencies from all continents to work together on finding solutions.

“This conference is the forum where scientists, fire experts and government ministries can learn from one another.” ▶

► The United Nations Undersecretary General Margareta Wahlström, and José Antonio Prado of the Food and Agricultural Organisation, will give opening addresses at the conference, and policymakers from 180 countries will take part in a panel discussion through video conferencing.

Highlights include a presentation by Canadian scientists Mike Flannigan outlining studies suggesting that more, larger fires are occurring as the world heats up, although there is a large variability and fewer fires are expected in some places.

Johann Goldammer, of the Global Fire Monitoring Centre in Germany, will present alarming new research showing that wildfires can set off explosions when burning land planted with landmines, and that chemical and radioactive air pollution can result from the burning of terrain contaminated by mercury, radioactivity and depleted uranium ammunition.

He will also describe how wildfires on the edges of human settlements are causing rising air pollution, affecting human health.

Philip Frost, of South Africa's Council for Scientific and Industrial Research (CSIR), will outline latest developments in the South African satellite monitoring system, Advanced Fire Information System (AFIS), which gives near real-time information, and how it has boosted efforts to predict, monitor and assess fires.

- Adapting to climate change: integrated fire management in the post-Kyoto period
- Fire management and carbon management innovations
- Community fire awareness, prevention and survival - revisiting stay or go
- Resource sharing and co-ordination
- Best practices and new technologies in fire detection and suppression
- Recent advances in fire science and fire management applications
- Developing future leaders and leadership programmes
- Using fire to sustain ecosystem services in fire adapted environments
- Mitigation, wildfire risk reduction and vulnerability
- Integrated fire management and poverty alleviation in developing countries
- Institutionalising application of the incident command system
- International exchange and assistance programmes and protocols

The Wildfire 2011 programme



World renowned strategist to speak at SA Wildfire Conference

Renowned South African strategist, visionary and author Clem Sunter will deliver the keynote address at the Wildfire 2011 conference to be held at Sun City South Africa in May.



Clem Sunter

Sunter will discuss how to plan for and manage the risk of catastrophes such as runaway wildfires. The conference is the hottest event on the international fire fighting calendar. The theme is "Living with fire – addressing global change through integrated fire management".

Sunter's talk on "A model for catastrophic risk management" will outline how local governments and other organisations have previously responded to catastrophes with varying degrees of success, and a methodology for preparing for and coping with disasters.

This is highly pertinent in an era in which the climate is changing fast and natural disasters occur frequently, recent examples having included the flooding of the Orange River in South Africa and runaway fires in California and Australia, as well as flooding and, more recently, Cyclone Yasi, in Australia.

Sunter's methodology includes identifying all potentially catastrophic events; plotting these on a matrix to show their seriousness and probability; identifying all organisations with relevant roles to perform should a disaster strike, and practicing pre-event and post-event drills, having

undergone a cost-benefit analysis of each drill. He will explain these steps in detail at the conference.

It is essential that local authorities forge good relationships with weather experts, so that information on potentially catastrophic weather conditions is shared constantly, Sunter says. However, it is not only local governments who have failed in this regard. Few companies, even among top multinationals, practice catastrophe risk management. ▶



Managing and fighting wildfires, just one of the topics that will be addressed at the conference



Job creation through management programmes will be highlighted

▶ This is the first project of its kind in Africa, developed in conjunction with NASA's Earth Observation System and the University of Maryland. The South African government provided seed funding.

Navashni Govender of SANParks will highlight the organisation's use of high-intensity fires to combat thickening scrub in parts of the

Kruger National Park that were previously dominated by grassland and tall trees - the crucial savannah biome, which extends across much of South Africa and sustains millions of people.

The thickening scrubland is partly due to rising levels of atmospheric CO₂, which helps scrubland to thrive.

A controlled fire on this scale is a first for South Africa, if not globally.

Other highlights include a presentation by Tanzanian government official Felician Kilahama on Tanzania's efforts to reduce emissions caused by deforestation and degradation (the REDD programme) through better fire management programmes. Another presentation will describe ▶

► “Ever since Chantell Illbury and I wrote *The Mind of a Fox* nearly 10 years ago, we have constantly advocated that you cannot just play scenarios; you have to consider the options for action available to you and select the best ones in advance,” Sunter says. “Your response in the event that a scenario materialises is likely to be more swift and effective than action taken in the heat of the moment.”

Sunter was chairman and CEO of the gold and uranium division of Anglo American Corporation for years when it was the world’s largest gold producer. He is renowned for his scenario planning, which described two possible roads for South African in the 1980s, one leading to a negotiated political settlement to end the apartheid era and the other a civil war.

He gave a presentation to then-president FW De Klerk and the South African Cabinet in 1986, and visited Nelson Mandela in prison to discuss the future before his release. He was recently awarded an honorary doctorate by the University of Cape Town for his scenario planning, and was also voted by leading South African CEOs as the speaker who has made the most significant contribution to business in South Africa.

Until recently, Sunter was chairman of the Anglo American Chairman’s Fund, rated the premier corporate social responsibility fund in South Africa. Since 1987, he has authored 14 books, some of them bestsellers, and has been mobilising the private sector in the war against HIV/Aids. ▲

► how satellite observation has improved REDD programmes.

One highly topical presentation will describe Australia’s controversial and revised Prepare, Stay or Go policy, which came to light after 173 people died in the Victorian bushfires of 2009, and how policy subsequently shifted.

Job creation through fire management programmes will also be highlighted. South Africa’s government-funded Working on Fire programme will present on its success in using an environmental problem to create large numbers of jobs, helping alleviate poverty in many communities, and Ghanaian forestry official David Duodu-Asare, will describe a similar poverty alleviation project run by the International Tropical Timber Organisation in Ghana.

“Fire management is a very broad science, requiring knowledge of the creative and destructive effect of fire and humans’ complex relationship to it,” said Charlton. “This makes it very challenging, but also very exciting.”

Wildfire conferences only take place every fourth year with past conferences have taken place in Seville, Sydney, Vancouver and Boston.

More information is available on the website www.wildfire2011.org.za ▲



“Water bombers” strengthen Cape aerial fire fighting resources

Pre-season planning and sound partnerships are being credited for the efficient and quick response to wild fires in the Western Province this summer.



One of the recently deployed Dromader bombers in action



Mike Assad, national operations manager, FFA Aviation



Colin Deiner, chief director of Disaster Management and Fire for the Western Cape

Four fixed wing bomber aircraft (Single Engine Air Tankers; known as SEAT's) have been contracted to the Provincial Disaster Management Centre (PDMC) by FFA Aviation. The SEAT's carry mixed water and foam loads of between 1800 and 3000 litres, and as they are preloaded, can be quickly dispatched to the scene of a fire. PDMC's initiative has created an opportunity to demonstrate that the bombers are as effective fighting fires in the Western Cape as in the Northern provinces and on the Eastern seaboard. Cape fire fighting authorities are in agreement that deploying these aircraft has increased the overall effectiveness of the aerial fire fighting team in the Western Cape.

“The decision to deploy the SEAT's has been welcomed across the board,” said Mike Assad, FFA Aviation's operations manager. “From the beginning of December to early February they had already flown more than 150 hours, supporting ground veld fire fighters in the control of wild fires.”

The FFA Group of companies, which specialises in integrated fire

management internationally, has implemented the award winning Working on Fire Programme (WoF) on behalf of National Government since 2003.

In addition to the four SEAT's, WoF supplies the Western and Southern Cape with six Bell “Huey” helicopters and five spotter aircraft to support the 557 WoF ground crew members that work the fire lines, the aerial water-drops cooling the fires sufficiently to allow safe extinguishing at ground level. The spotter planes are an integral part of the process as ‘eyes in the sky’ fore filling the role of command and control in conjunction with the ground base incident command team.

Colin Deiner, Chief Director of Disaster Management and Fire for the Western Cape, said the key to quick wildfire control was to suppress the fire before it became established. For this reason, the SEAT's were on standby at Stellenbosch and Fisantekraal airfields for quick dispatch to wildfires.

“The bombers are currently being used alongside the helicopters and spotter planes which are already a ▶

* Working on Fire is a Government-funded programme - implemented by the FFA Group in 2003 to develop an integrated national wild fire fighting prevention and wildfire fighting capacity. WoF includes a job creation and development component with fire fighters being recruited from communities and put through extensive training programmes equipping them to become skilled veld and forest fire fighters. They are deployed in teams of 18 to 25 as part of a co-ordinated national network of aerial and ground fire fighting resources. WoF supplies fire fighting services to the forestry industry in South Africa, provincial government departments, national and provincial parks, fire protection associations, municipalities, parastatals and various other organisations, and is available to be mobilised as a national fire fighting resource in the event of disaster or potential disaster. 112 firebases have been established throughout South Africa. In partnership with the National Disaster Management Centre, WoF supplies helicopters and fixed-wing aircraft to supplement local aerial fire fighting efforts. The programme was established under the umbrella of the Expanded Public Works Programme (EPWP) underpinned by the National Veld and Forest Act of 1998 and the Disaster Management Act of 2002.



► regular feature of our veld and forest fire operations," said Deiner.

Deiner added that an estimated R780 million in damage was prevented in the Paardeberg area when a wildland fire was doused at the end of January, the SEAT's and helicopters working in tandem with fire fighters. Two other recent fires, in the city on Signal Hill and at Piketberg, saw effective use of the 'bombers'.

Assad said the FFA pilots were among the most skilled in the world. "These are men who work in high winds, adverse weather conditions and blinding smoke. Aerial fire fighting is a specialised skill, and these pilots are experts in their field, having had hundreds of hours of experience under the toughest conditions imaginable.

Michelle Kleinhans, the Working on Fire Programme's national co-ordinator, said the fire season in the Western Cape had a potential two months of fire fighting ahead.

"We can only begin to scale down fire fighting operations after sufficient autumn rain has fallen, but history has taught us that March and April can produce a large number of runaway fires."

In May the aviation teams begin preparing for the winter fire season in the northern and eastern parts of the country, and leave the Western Cape for these areas. ▲





This photo taken Wednesday, March 16, 2011 and released by Tokyo Electric Power Co. via Kyodo News Friday, smoke billows from wrecked unit 3 at Japan's crippled Fukushima Dai-ichi nuclear power plant in Okumamachi, Fukushima

Fire fighters in Japan blast more than 60 tons of water on reactor

A special team from the Tokyo Fire Department blasted more water on the No. 3 reactor in Fukushima in Japan, reports The Daily Yomiuri

As the world watched, efforts continued to avert a disaster at the troubled Fukushima No. 1 nuclear power plant, with personnel trying to restore power to damaged reactors and the self-defence forces and fire fighters persevering in their water-spraying mission.

Connecting an outside power supply to the nuclear plant would enable cooling functions to be restored at the No. 2 reactor, plant operator Tokyo Electric Power Co (TEPCO) said. The containment vessel at this reactor is feared to have been damaged in the magnitude nine earthquake and ensuing tsunami that struck March 11, 2011. TEPCO said it aimed to restore power as soon as possible.

Meanwhile, a special team from the Tokyo Fire Department blasted

water on the No. 3 reactor. At a press conference 19 March 2011, chief cabinet secretary Yukio Edano said the water spraying operations at the No. 3 reactor had been successful and the situation at the reactor had been stabilised.

Work to restore electricity was being done in three separate reactor groups—Nos. 1 and 2; Nos. 3 and 4; and Nos. 5 and 6. The highest priority was the No. 2 reactor, TEPCO said.

The second emergency diesel power generator at the No. 6 reactor was repaired resulting in TEPCO being able to activate the heat exchanger at the No. 5 reactor's temporary storage pool for spent nuclear fuel rods, which decreased the temperature in the pool by about 1 C. Until then, TEPCO had only one emergency generator at the No. 6 reactor that it used to

circulate water in spent fuel rod pools at the Nos. 5 and 6 reactors. However, this did not prevent temperatures in the pools from rising.

TEPCO also drilled holes in the roofs of the buildings housing the Nos. 5 and 6 reactors to prevent hydrogen explosions.

Two more vehicles equipped with power distribution devices were placed at the Nos. 3 and 4 reactors. On Saturday, March 19, TEPCO was trying to repair high-voltage cables that had been disconnected after the earthquake, and was also laying cable to the No. 4 reactor's power distributor, the firm said.

The government's Nuclear and Industry Safety Agency said radiation levels inside the power station were more than 5,000 microsieverts per ▶



Photo: Reuters

Japan Air Self-Defense Force CH-47 Chinook helicopters collect water from the ocean to drop on the reactors at the Fukushima Daiichi nuclear plant in Fukushima March 17, 2011.

► hour north of the main office building, about half a kilometer northwest of the No. 3 reactor, at 5 p.m. Friday, March 18. Radiation at this location decreased to 3 181 microsieverts per hour at 1:50 a.m. Saturday, a reduction of about 40 percent.

Although this is lower than the 250,000 microsieverts emergency workers are allowed to be exposed to in special circumstances, levels remained high. High radiation means work near the reactor buildings needed to proceed carefully.

On Friday, March 18, Self-Defence Forces fire engines sprayed the No. 3 reactor and were joined by a chemical pumper on loan from the U.S. Yokosuka naval base, operated by two employees of a TEPCO subsidiary.

Tokyo fire fighters sprayed about 60 tons of seawater toward the temporary storage pool at the No. 3 reactor in about 20 minutes.

There are still unconfirmed reports of multiple fire fighters killed or missing during the earthquake and tsunami.▲



Planned burn jumped road and fire break

The City of Cape Town reported that it had to call in fire fighting helicopters and planes after a “relatively controlled” fire that was started “did not go according to plan”.

The “planned ecological burn” at Tygerberg Nature Reserve, started by a city team to rejuvenate the renosterveld vegetation in the area, “jumped the road and fire break along the highest ridge of the Tygerberg”, reports The New Age.

When the fire then started to spread downwards towards Kanonberg, an upmarket northern suburb, the City said it decided to call in “aerial support” and the fire was contained. Julia Wood, the manager of the City’s biodiversity management branch, confirmed that two fire fighting helicopters were called in, as well as

two fixed-wing water bomber planes and one spotter plane.

Along with that, the city had a team of 74 biodiversity staff on the scene, while another 60 fire and rescue staff were brought in.

“Our big concern was property and to ensure our own staff were fine,” Wood said, adding that there were “minor flare-ups” afterwards, but that these were dealt with and the area was monitored for at least the following week.

The city, in a statement, defended its decision to start the “relatively

controlled” fire, saying that “it was an ecological imperative to burn this area”. “The majority of the critically endangered Swartland shale renosterveld had not burnt in over 40 years,” the city said.

“Fire is the ecological driving force in this system and natural fire cycles would have occurred in cycles closer to eight years. “It is far more responsible to burn under relatively controlled conditions with the fire fighting resources at hand.”

The city is to foot the bill for the helicopters and planes drawn in to put the fire out, Wood added. ▲

Koeberg prepared for emergencies



Source: Philipp P. Egli

Koeberg Power Station

After the Japanese nuclear disaster grabbed headlines around the world, South African Energy Minister Dipuo Peters said she was satisfied with the Koeberg nuclear plant’s readiness for emergencies

Peters said that South Africa’s National Nuclear Regulator had indicated that the design structure of the nuclear power station near Cape Town provided a “reasonable” assurance of its ability to withstand external events such as earthquakes and tidal waves of a plausible magnitude.

A disaster management plan has been developed for Koeberg and is tested every other year to ensure its readiness in the event of an accident. The last of these exercises was done at the end

of November. “I am therefore satisfied at the level of readiness to deal with emergencies at Koeberg,” Peters said during her visit to the plant.

A review of nuclear safety features and back-up power systems is currently being undertaken in different parts of the world to check the ability of the reactors to withstand the impact of big natural disasters. However, this does not necessarily translate to a rethink of the policy of building nuclear power stations. ▲

Fire causes Centurion power failure

A fire at a substation caused power outages in parts of Centurion, SAPA reports

The cause of the fire, which engulfed one of the primary substations in the area at 6pm, was unknown, spokesman for the City of Tshwane, Console Tleane said.

Centurion Lake, Centurion CBD, Highveld, Highveld Techno Park and parts of Zwartkop were affected. No estimated repair time could be given, as the damage had yet to be assessed.

Tshwane fire fighters were called to extinguish the blaze. ▲

Israel investigating new fire fighting plane to prepare for next wildfire

Israel's minister Eli Yishai recently viewed the latest and most advanced fire fighting aircraft, the Beriev Be-200.



The Russian built Beriev Be-200

The visit comes following a decision by the Prime Minister, Binyamin Netanyahu, to improve Israel's air capabilities during situations of raging wildfires.

The capabilities of the Beriev Be-200, a Russian aircraft, were demonstrated during the Carmel wildfire last December, when it was used by Israel as part of the fire fighting efforts. It is now being offered to Israel for sale.

The aircraft has an advantage over similar competing aircraft both in terms of its response time as well as in the quantity of water that it can carry. The Beriev Be-200 can carry up to 12,5 tons of water and the high speed at which it can move allows it to quickly arrive at a source of water and begin performing the task of putting out any fire.

In addition to putting out fires, the aircraft can perform a variety of other tasks including rescues at sea, marine patrols, securing maritime drills, transporting cargo and the like.

"The advantages of this plane are obvious," Yishai said following the viewing. "I'll pass my impressions on." ▲





The container vessel, *Safmarine Nomazwe*

Ship carrying charcoal catches fire in Cape Town

The City of Cape Town reported that it had to call in fire fighting helicopters and planes after a “relatively controlled” fire that was started “did not go according to plan”.

Ship owner Safmarine reports that a fire which broke out on her container vessel *Safmarine Nomazwe* in February was successfully extinguished by emergency services.

Three containers of a shipment of nine containers caught fire at night whilst *Safmarine Nomazwe* was at anchorage off the port of Cape Town, South Africa. The vessel was carrying a consignment of charcoal loaded in Durban en-route to Cape Town.

Emergency services and relevant authorities were informed of the incident and the *Safmarine*

Nomazwe returned to Duncan Docks, Cape Town with both vessel's crew and fire brigade and rescue services attending the fire. All nine containers were discharged from the ship with the fire successfully extinguished.

The South African Maritime Safety Authority (SAMSA) centre for sea watch said that it received a report on Wednesday February 16, 2011 at about midnight regarding a fire just outside Cape Town harbour.

SAMSA said that on inspection, it was ascertained that one of the containers on board the vessel was on fire. The containers were monitored and it was

discovered that two more containers caught fire.

“All fires were extinguished. A decision was made by the Ports Authority to bring the vessel into port where SAMSA surveyors conducted further inspection,” said SAMSA.

“Following the fire that broke out at the harbour on the vessel, SAMSA surveyors discovered that there was no physical damage to the vessel or crew. The damaged containers were offloaded to enable thorough inspection of the entire vessel, which will provide us with a conclusive report,” said SAMSA centre for ships executive head Sobantu Tilayi. ▲

Israel investing in new fire engines

As the Israeli government tackles revamping the country's antiquated fire fighting services in the wake of last year's deadly Carmel Ridge fire, the United States is eyeing a chunk of that budget, expected to total upwards of 220 million US dollars this year.

The US Embassy in Tel Aviv has submitted a complaint to the Trade, Industry and Labour Ministry that US-made fire trucks are being "discriminated" in tenders issued recently by the national fire fighting and emergency services commission, according to a report published in the business supplement of Israel's daily Yedioth Aharonoth.

While US-made trucks are sold in Israel and meet local standards, the tenders' prerequisite is for European-produced fire engines.

In the wake of the blaze in northern Israel, which left 44 people dead, forced thousands to flee their homes and torched some five million trees over 6 000 hectares, Israeli Prime Minister Benjamin Netanyahu pitched earlier this month an emergency services bill worth 800 million shekels (about 220 million US dollars) to his cabinet ministers. A scathing report, citing lax funding and administration of the fire services over the course of several governments, was coupled by harsh criticism of Netanyahu and Interior Minister Eli Yishai by officials and the bereaved families, who called for their resignation.

The prime minister's bill, which was expected to make a clean break with the past, would shift the administration of the fire and rescue services over to the Ministry of Public Security and get a revamped service up and running by the end of 2012. The proposal slates an initial investment of 350 million shekels (about 97 million US dollars) in establishing an upgraded national fire service and an aerial fire fighting squadron, which Netanyahu said would "begin operations within a few months." It reportedly intends to procure 100 fire engines in all.

The US-made trucks have a price tag similar to the European fire engines, but their procurement could be financed via the US military assistance funds to Israel, which was estimated at 2,7 billion US dollars annually.

Meanwhile, Caterpillar, a US heavy machinery manufacturer that was already extensively accepted in Israel, is offering Israel a giant fire engine. The "Caterpillar WT" can tote up to 40 tons of water -- half the capacity of the "Super Tanker" Boeing jet leased by Israel from an Arizona-based company to deal with the forest fire, and six times the amount carried by the Canadian fire fighting planes Israel is considering to purchase. Converted from super-sized trucks used at mining sites, Caterpillar WT can operate in rough forest terrains and urban areas hit by earthquakes. ▲



MAN CEO announces 2011 objectives

“MAN’s vision globally is to have the best people, the strongest customer orientation and superior technology and services to be number one in the market,” detailed Markus Geyer, CEO of MAN Truck & Bus.

“MAN is a strong brand with more than 250 years of business history founded on the core values of state-of-the-art engineering and product enthusiasm. Today, these values have been extended to enhance a strong customer focus.”

The incident took place when the 600 MW unit at Duvha had been taken off load to perform a required turbine test. This is a statutory test that is carried out on every power station. In the execution of the test, the

protection on the unit failed, causing severe mechanical damage and starting a fire, which was brought rapidly under control by the power station’s fire team.

Eskom has launched a technical review of the incident.

“The technical review is aimed at finding the cause of the unit failure so that we may take appropriate action to prevent similar incidents in future,” said Eskom’s divisional executive for generation, Thava Govender.



Markus Geyer: No threat from Chinese manufacturers - “True service orientation is hard to copy.”

Sleeping fire fighter killed by fire truck

Die Burger reports that a fire fighter who was sleeping under a fire truck while taking a break from fighting fires in the Overstrand area, was killed when the vehicle was started and drove over him.

The driver of the fire truck is still badly traumatised, said Riaan Jacobs, fire chief of the Overstrand municipality. He was admitted to the Hermanus Medi-Clinic after making the shocking discovery. The driver was a cousin of Harold Jacobs, 20, the fire fighter who fell asleep underneath the vehicle.

Working through the night

The fire fighters were working through the night to fight wildfires in the Overstrand area. Fire chief Jacobs said the other fire fighters, who were there when the incident happened, had all gone back to work after receiving trauma counselling.

Kleinmond police station commander Captain Jakobus Marthinus said police were

investigating the incident although no charge had been laid. No one was arrested and a decision still had to be taken whether anyone would be prosecuted for negligence.

The fire fighters were working through the night to fight wildfires in the Overstrand area

Fires under control

Meanwhile, the fires in the area are under control. The fire, which started near the Arabella Sheraton Hotel was probably caused by arsonists and affected about 12 500 hectares. ▲

13 Hospitalised after Durban factory fire

Thirteen workers were sent to hospital for smoke inhalation after a fire at a chemicals factory in Pinetown, KwaZulu Natal paramedics reported



ER24 paramedic Derrick Banks said they were sent to Life Westville and Life Crompton hospitals after being treated for smoke inhalation at the factory in Westmead.

Banks said everyone was evacuated from the building and the fire was contained. ▲

The Advanced Fire Information System (AFIS)

Implementation of a novel satellite-based fire alert and information system (AFIS) to help combat line faults caused by fires underneath Eskom transmission lines - Developed by South Africa's largest power company Eskom, and South Africa's biggest science council (CSIR)

The quality of electricity supply through transmission lines are severely affected (in the form of line faults) by natural phenomena such as, bird streamers (excrement), lightning, fires and air pollution.

outside of Johannesburg that was sponsored by the Department of Agriculture in 2003 and a second station on the CSIR campus in Pretoria operated by the Meraka Institute which was sponsored by Eskom in 2008. The two stations are

the second station will automatically provide the relevant products to ensure a continuous data stream.

Eskom requires information on fires every 15 minutes and whilst the MODIS data is sufficiently high in spatial resolution, the temporal resolution is less than satisfactory. Consequently the CSIR proposed the use of the Spinning Enhanced Visible and Infrared Imager (SEVIRI) sensor on board the Meteosat Second Generation (MSG) satellite (Figure 2). This satellite is in geostationary orbit above the equator and the SEVIRI sensor transmits data every 15 minutes. MSG data is observed at a spatial resolution of 4,8km².



Figure 1. Grass fires burning underneath Eskom power lines

Line faults cause short but significant interruptions in the power supply which have major financial implication for factories running continuous production processes. Eskom operates approximately 28 000 km of transmission lines in South Africa, most of which crosses through fire prone biomes. Consequently, large parts of the transmission grid are exposed to grass and bush fires (Figure 1), especially during the dry winter period of June to October. The South African Advanced Fire Information System (AFIS) is the first near real-time satellite-based fire monitoring system in Africa and incorporates satellite fire detection information from both the Terra and Aqua MODIS satellites as well as the Meteosat Second Generation (MSG) geostationary satellite from Eumetsat providing a continuous view of Southern Africa.

The CSIR is operating two MODIS receiving stations, one from the Satellite Application Centre (SAC)

approximately 70 km apart but are connected on a one gigabit network to enable fast data transfers. Both stations are making use of the Sediba processing system which is an in house developed MODIS processing system based on open source software. Once data is received and processed products are uploaded to a central server on the one gigabit network from where the AFIS server will upload the relevant products. If one receiving station goes down

Once the processing of the hot spots are completed the information is published on a website (www.wamis.co.za), and email and SMS cell phone alerts are sent. Due to the fact that the Eskom field personnel are normally out on patrols, the idea emerged to send text message warning of fires to their mobile phones (Figure 3). In the case of power lines, only the fires within 2,5km of the line are reported. Where possible, the National Control Centre could temporarily switch out the lines under threat and the field staff can activate fire suppression teams where available. Field staff also report to the control centre on the conditions at the site of the fire. This system is the first of its kind in ►

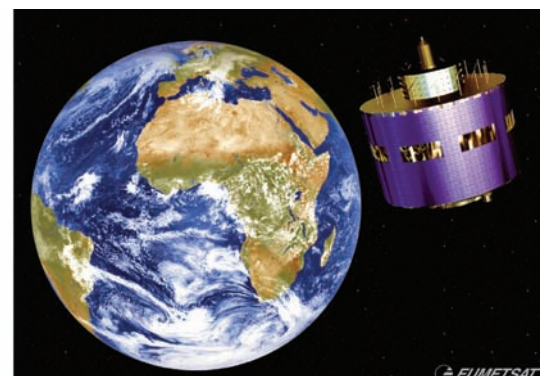
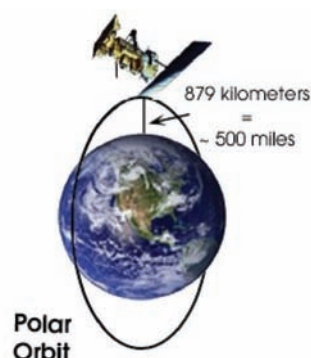


Figure 2. A representation of the MODIS polar orbiting satellites on the left and the geo-stationary MSG on the right



Figure 3. An example of three text message alerts of a fire received from the Aqua satellite. The first one is of a fire 2,7km west of tower 45 on the No2 Ankerlig – Aurora line. The observation time was 14:45 South African Standard time.

► the world where an electrical utility applied remote sensing together with cell phone technology in the monitoring of fires under power lines.

Eskom does not have an in-house fire fighting ability but relies on the many Fire Protection Associations (FPA) and fire brigades across the country to extinguish fires. Consequently, the web and text message service is extended to all these parties free of charge.

The system developed from this project was named Advanced Fire Information System (AFIS) and is based on open source software (Figure 4). Most users adapted to the system without much trouble, although in areas of low bandwidth, the system sometimes proved to be slow.

Benefits of the AFIS system

The evaluation also identified three main benefits from the system

Better overview of fires

Field staff indicated that the SMS fire alerts increased awareness of fires in their area in terms of the actual number of fires detected. It also enabled them to be proactive and get information about fires from local land owners. Specifically, the location information contained in the fire alerts allowed field staff to phone land owners on whose land fires were detected as burning to confirm the status of the fire. The landowner could then, for example, indicate that the detected fire was the result of a controlled agricultural burn and therefore did not require action on the part of Eskom, or they could alternatively confirm that the fire had got out of control, and confirm the need to mobilise. Eskom grid managers and the national control center also reported that the SMS fire alerts gave them a better overview of fire occurrence along the grid. Some also reported benefits of the fire alerts creating a “big brother” syndrome field staff would know that managers would be able to check up on them to determine whether they responded to an alert.

Increased decision support for managing vegetation on the lines

Building up an historical record of fire in the area was also noted

as a benefit to the planning of resource allocation. Comparing the historic fire records has allowed Eskom management to assess the effectiveness and timing of their vegetation management and in turn decide when interventions will be most effective. Overview of fires for a number of years – identify where fires are most likely to occur e.g. difference between communal land and game farms (strict regime – control fires) see where to focus.

Making computers seem more usable

The web-based version of the fire alert system also led to the unexpected benefit of making computers seem more usable to some managers: “It’s made some of the more sceptical managers more computer friendly... a lot of managers regard their computer with scepticism and it’s enabled them to actually approach [the web mapping service] and start using it for what it is there for”.

Future developments

The AFIS system will become an even more important tool to fire managers within Southern Africa within the next few years with the inclusion of numerous new products and services. This will include fire detection capabilities from numerous new satellites, a burned area product and daily fire danger forecasts for the region.▲

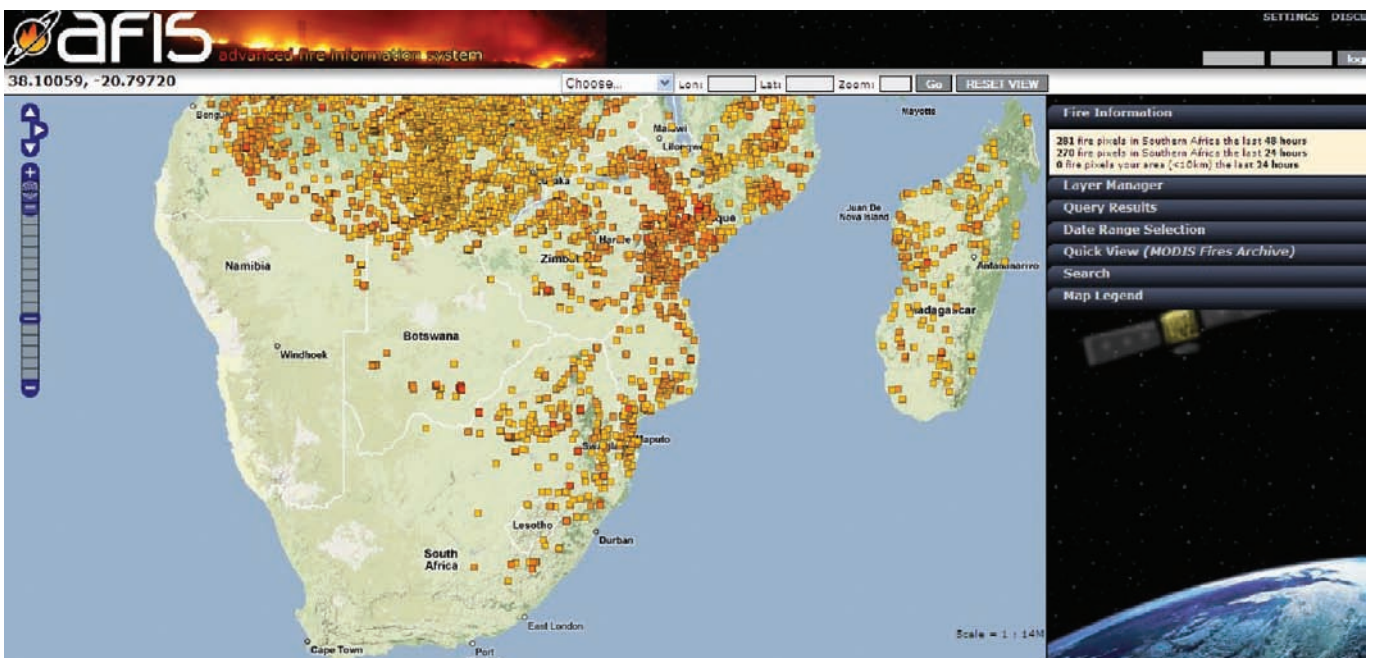


Figure 4. A graphic representation of the AFIS II interface showing active fires in Southern Africa



Tiaan Pool and Andrew Mc Ewan of Saasveld handing over the William Teie bursary to Mbali Luthuli and Forest Fires

Fire Manager's Handbook on Veld and Forest Fires

Strategy, tactics and safety

Published by the Southern African Institute of Forestry (SAIF), the handbook is an adaptation of two handbooks used in the United States of America. The Fire Fighters Handbook on Wildland Fire Fighting and the Fire Officers Handbook on Wildland Fire Fighting are both award winning textbooks. They were written and published by William C. Teie.

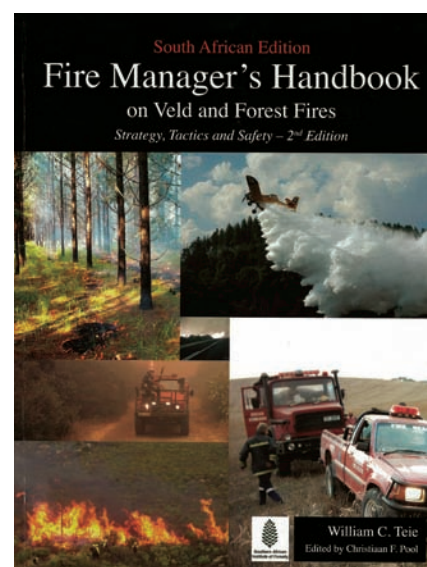
In late 2001, Jake Oosthuizen, chairperson of the Forest Fire Technology Transfer Committee, and owner of Zululand Fire Protection Association Services, emailed Chief Teie to see if he would be willing to work on adapting his two works for South Africa. That was the start of this project and a friendship. The Fire Manager's Handbook on Veld and Forest Fires is an upper level text, which draws most of its material from the Fire Officers Handbook. Pieces of the Fire Fighters Handbook have been used to make this new work a stand alone text.

The first edition was published in 2003 and Tiaan Pool, Nelson Mandela Metropolitan University (Saasveld campus) assisted in editing the text, amongst others.

The first edition was so successful that in spite of shortcomings reprints were made in 2003 and again in 2005. The need for a second edition was evident and the SAIF, to whom the author had signed over the copyright for the second edition once again approached Tiaan Pool to serve as editor.

The second edition addresses all land users and fire organisations. This handbook is for fire officers, forest and park managers, fire association leaders, fire fighting supervisors and students of forestry.

Thanks to various sponsorships, the Handbook's income is now being channelled to a bursary in honour of the author, William C. Teie. The first bursary has been awarded to



The Fire Manager's Handbook on Veld and Forest Fires

Mbali Luthuli, a first year student at Saasveld. Mbali was chosen on merit from 13 of students.

The Fire Manager's Handbook on Veld and Forest Fires is available from the SAIF. Visit www.saif.org for more information. ▲



Report in *The Herald Sun*, Australia

Fire barrier curtains: a life saver

Lifesaving fire barrier curtains from Storm King Mountain are now available to the southern African fire fighting fraternity.

Storm King Mountain™ creates burn over protection solutions providing products that use thermal insulating materials to protect fire fighters in wildland and forest fires. The company's products are designed to handle the direct flame contact of fast moving flame fronts, with no burn through. Storm King Mountain Technologies is a private company, formed in 1994 to build valuable solutions from technologies created by the world's leading aerospace applications.

Named after the mountain in Colorado where fourteen fire fighters died in a burnover in 1994, Storm King Mountain has been a leader in providing products that use thermal insulating materials to protect fire fighters in a fast moving flame front.

The products are used in a wide variety of applications, including fire trucks, bulldozers, tractors, brush engines and structural fire fighting apparatus.

Vehicle burn over incidents

Although fire fighters are trained to avoid entrapments by identifying fire behaviour and changing their tactics to provide for safety, numerous cases of fatalities have occurred due to fire overrun or burn over of the fire fighters and their vehicles. The vehicle can help provide protection from the direct flames and their convective and radiant heat that can injure a fire fighter during a fast moving flame front.

Based on various tests in wildland fires, the highest temperatures and heat

fluxes usually occur at the upper two-thirds of the flames. Temperatures can commonly reach 1400°C, (2500°F), with total convective and radiant heat fluxes of 85kW/m2 occurring for periods of up to 60 seconds. Higher temperatures and heat fluxes occur in many instances at the height of the fire fighting vehicle cab. This places the fire fighter at greater risk and substantial heating of the cab interior can take place in a burn over. While windows block around half of the radiant heat flux, breaking of the glass and failure of the rubber or metal window frame can leave a fire fighter exposed to the direct flames from the wildfire and its convective and radiant heat loads. Storm King Mountain™ fire curtains and enclosures are designed to be a fire resistant barrier from the fast moving ▶

► flame front of a wildfire. It minimises the heat intensity that would normally be passed through window glass or an opening such as in an open jump seat cabin.

Along with any fire fighting vehicle comes a variety of materials and fluids which, when subjected to the heat and flames of a fire, produce toxic gases or increase the fire intensity. Electrical wiring, brake and fuel lines, sound deadening materials, lightweight plastic mouldings and panels produce a black toxic smoke when heated, which can increase the need to use Self Contained Breathing Apparatus (SCBA). The Storm King Mountain™ fire curtains and enclosures are designed to be a thermal barrier for the cab and assist fire fighters in surviving the initial flame front passage, it is expected that you will be able to stay in the vehicle while a fast moving bush fire passes and then the fire fighters will have to abandon the burning vehicle. It is important to be aware of what is happening outside the engine particularly identifying those parts of the engine that might be on fire.

History

On July 6 1994, fourteen fire fighters died in a burnover on the South Canyon Fire on Storm King Mountain in Colorado, USA. Jim Roth received the news that every fire fighter family member fears. His brother was one of the fourteen killed.

Jim had an extensive background in aerospace engineering. He was concerned that the piece of equipment that his brother had as his last line of protection wasn't manufactured of the best possible material out there. With his expertise in aerospace engineering, he knew that there were other materials that would provide better protection to fire fighters.

He researched wildland fire fighter safety procedures and equipment and formed Storm King Mountain Technologies with the goal of developing a better fire shelter.

The fire curtain Jim developed is made of four layers: a reflective layer, followed by a thermal insulation core layer, another reflective layer, then finally a Nomex layer with strips of FR Velcro around the window frames. The product is designed to handle both radiant heat and direct flame impingement. The material comes from the aerospace industry and is generally used around rocket engines on the Space Shuttle and other spacecraft.

He partnered with a company that develops materials used by NASA whom also felt that using their materials to save lives was a worthwhile endeavour.

Jim's view point was that just saving one life would make it all worthwhile. Since its inception, not only did this product save one life but many lives of fire fighters in the USA and in Australia where it was also responsible for heroic rescues of several civilians during the 2009 Australian fire storms.

These lifesaving fire curtains will now be manufactured under licence in South Africa by Working on Fire International. ▲



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Fuel reduction could prevent future super fires

Wildfire management: a case study in wisdom versus folly

Alexander Held, WoF Europe, based on work of R Underwood, Bush Fire Front, Western Australia (BFF WA) – (Published unedited)

Photographs courtesy of Bombers, Grup de Actuacions Forestals (GRAF), Catalunya, Spain

Many years ago, still a young man, I watched for the first time the grainy, flickering black and white film of the British infantry making their attack on the opening day of the Battle of the Somme. The stark and terrible footage shows the disciplined soldiers climbing from their trenches and, in line abreast, walking slowly across no-man's land towards the enemy lines. They scarcely travel a few paces before the German machine gunners open up. They are mown down in their thousands. They are chaff before a wind of fire.

I can still remember being struck nerveless by these images, and later my anger when I realised what that calamitous carnage represented. It spoke of the deep incompetence of the generals who devised this strategy of doom and then insisted upon its implementation. It spoke of front-line men led by people without front-line experience. It spoke of

battle planners unable to think through the consequences of their plans, and who devalued human lives. It spoke of a devastating failure of the human imagination.

Worst of all, the strategies of the World War I generals demonstrated that they had not studied, or that they had forgotten, the lessons of history. In the final year of the American Civil war, 50 years earlier, the Union army had been equipped for the first time with Springfield repeating rifles, replacing the single shot muskets they had previously used and still were being used by the Confederate army. The impact on Confederate soldiers attacking defenders armed with repeating rifles was identical to that later inflicted by machine guns on the Western Front. But it was a lesson unlearnt, of collective wisdom disregarded.

None of you will have any difficulty in seeing where this analogy is taking me.

The catastrophic wildfires in Europe in 2009 and the other great fires of recent years in Europe, Australia, South Africa and the USA are dramatic expressions **not just of killing forces unleashed**, but of human folly. No less than the foolish strategies of the World War I generals, these wildfires and their outcomes speak of incompetent leadership and of failed imaginations. Most unforgivable of all, they demonstrate the inability of people in powerful and influential positions to profit from the lessons of history and to heed the wisdom of experience.

But just a minute, I can hear some of you thinking. Is this fellow going too far here? What about the malignant influence of global warming on wildfire conditions, making things impossible for fire fighters? What about the unprecedented weather conditions on the day, making the fires of the 2009 fire season "unstoppable". What about the ►

► years of drought making the bush super-ready to burn? Does he not realise that conditions beyond human understanding have now arisen in Europe, making killer wildfires inevitable? And what about the promises of technology, the super-aerial tankers and so forth, that will give the initiative to our fire fighters for once and for all?

I have thought long and hard about all these issues. I am well aware of the drought, of the terrible conditions on the days of the fires, and of the view from some quarters that all of this is a result of global warming. I accept that drought and bad fire weather increase the risk of serious wildfires. What I do not accept is that “unstoppable” wildfires are the inevitable consequence. And while I will always welcome improved fire fighting technology, I know from experience and from an understanding of the simple physics of wildfire behaviour, that technology can never be a substitute for good land management. The serious wildfire is like a disease that is incubated over many years; good land management is the preventative medicine that ensures the disease does not become a killer epidemic.

To me, the epidemic of recent killer wildfires in Europe is not an indicator of what is inevitable in the future. To me, they are an indicator of the inevitable consequences of what has happened in the past. To me, these fires toll like bells: they toll for failed leadership, failed governance and failed land management.

The issues of leadership and of good governance are central to my position. What these terrible fires point to is that the leaders of our society, Europe’s politicians and senior bureaucrats, have palpably failed to do the most fundamental thing expected of them: to safeguard European lives and the environment in the face of an obvious threat. They have failed to discharge their duty of care. Just as we now look back with incredulity at the amateurish strategies of the generals in The Great War of 1914-1918, so will future Europeans look back on the work of those responsible

for land and wildfire management in the European countries (our wildfire generals) in the years leading up to The Great Fires of 2003-2009.

The toll of the 2007-2009 fires is shocking. Over 70 lives lost. Thousands of homes destroyed. Millions of Euros worth of social and economic infrastructure reduced to ashes. The work of generations, the farmlands, stock, fences, woolsheds, yards and pastures – dead and gone. Wild animals and birds - killed in their millions. Beautiful forests – cooked, in some cases stone dead. Catchments – eroding. The costs: multi-millions of Euros. Carbon dioxide into the atmosphere – the equivalent of a year’s supply for the whole of France for instance. Psychological damage to children and families – immeasurable.

Our wildfire generals... those premiers, ministers and senior wildfire bureaucrats in whom the people of Europe put their trust... can have no excuses.

They cannot say they didn’t know we have serious wildfires in Europe. This is no soft, green island where no wildfire ever burns. We have not arrived only recently in this land with its hot and dry summers. We have experienced many, many fire seasons in the past decades, with thousands of hot, dry and windy days, dozens of prolonged droughts, tens of thousands of thunderstorms, millions of lightning strikes, and hundreds of thousands of wildfires. This is no new or unique phenomenon.

They cannot say the impacts of intense wildfires on human communities were unimaginable. We have known for generations that settlements in fire prone environments represented the insertion of a fire-vulnerable society into a fire-prone environment. We have seen the consequences of mixing hot fires and settlements on many, too many occasions, to doubt the result.

They cannot say that Europeans are powerless in the face of the wildfire threat, that wildfires are “unstoppable”. From the earliest days of settlement, through to the evolution of the fire management

systems developed by experienced land and forest managers, we have known what is needed to minimise wildfire intensity and wildfire damage, even under extreme conditions. We know how to build and maintain houses in fire-prone environments so as to optimise their survival.

They cannot say that the relationships between fire and the vegetation are still unknown. There have been 200 years of observation and records and over 50 years of scientific research on this very subject. This experience and this research have confirmed that fire is not an alien visitor, but a natural part of bushland and forest ecosystems. The right sort of fire is an agent for rejuvenation, regeneration, recycling and bushland and forest health, a stimulus for biodiversity. Fire is to the forest and bush as are the waves and tides to Mediterranean seaweeds and marine life. It is the **absence** of fire, especially of **mild** fire that is the real threat to the forests, because the inevitable result is a landscape-level holocaust, from which it might take a century or more for recovery.

And they cannot say that they were not warned. Warnings have emerged from the aftermath of every damaging wildfire for the last 50 years or more... from inquiries, commissions and reports, from independent auditors and from land managers, wildfire scientists, foresters, farmers and fire fighters. In recent years the warnings have come thick and fast. Magnificent books have been written on the subject; there have been dozens of scientific papers and popular articles written by world-respected wildfire experts like Phil Cheney. There have been detailed submissions by professional groups such as “FireParadox”, “EuroFire” and others. They produced one of the best reports I have ever seen. Its key recommendations were simply “noted” in passing.

Can anyone say that no clear lessons have emerged from the wildfire calamities of the past? Can anyone say they are unaware of the previous fires that have burned European farms, settlements and suburbs, incinerated our national parks, nature reserves, rangelands and forests, or ►



The new development of wildfires in Europe: high intensity crown fires

► scorched our heathlands? Did no one notice all those wildfires over the years that cut power supplies, burned out bridges and roads, destroyed schools, churches and hospitals, interrupted or fouled water supplies, destroyed observatories and threatened species, plantations, orchards and vineyards?

No, there is no shortage of lessons. They have even flowed in, for those who should have listened and learned, from Greece, from Portugal, and from the western United States and Canada during the last few years.

Over and over again, the same words have rung out, the same message has been sent:

1. In our climatic zone with hot dry summers and periodic drought, and with our flammable vegetation and lightning strikes, wildfires are inevitable.

2. If fuels are allowed to accumulate, wildfires in bush land and forests rapidly attain an intensity that exceeds the human capacity to extinguish them, notwithstanding the most modern and massive suppression forces.

3. Communities and economic assets in the path of high intensity fires will suffer horrible damage.

4. But! Potential damage can be minimised by application of a fire management system that incorporates responsible planning, and high standards of preparedness and damage mitigation, especially fuel reduction.

5. And! We have a choice: fires are inevitable, but we can choose to have mild controlled fires, or ungovernable infernos.

No, our politicians and wildfire generals cannot say they have not been warned. They cannot say there were no lessons to learn. They cannot say the message had not been sent.

They can only say that it was not received, or that it was received but ignored. Neither excuse is acceptable.

So what **are** the explanations? Why were sound messages not received, or received but not acted upon? Why, after 200 years of experience and 50 years of world-leading research, after working examples of how to set up an effective system of wildfire management have been established..... how was it possible that our political and bureaucratic leaders opted to adopt a wildfire system that does not work, that fails to protect people from death, disaster and environmental calamity?

There are two answers:

The first is political. Put simply, in the last 25 years and when it comes to wildfire management, Europe's governments have failed to govern. The focus of politicians has been on getting elected or staying in power, not in providing intelligent, tough and effective governance. This has led to political parties

courting the preference votes of pressure groups and of city-based electors who are in the thrall of pressure group philosophies.

Despite the protestations of environmentalists over the last few weeks, there is no question that the influence of green activists at federal, state and local government levels has resulted in a steep decline in the standard of wildfire management in Europe, or halted its progress. Their influence is exemplified by two things: (i) opposition to prescribed burning for fuel reduction, resulting in unprecedented fuel build-ups in parks, forests and reserves close to population centres; and (ii) rural residential developments, in which developers and residents have been prevented or discouraged by environmentalist-dominated local councils from taking reasonable measures to ensure houses are wildfire-safe; and where people are living in houses in the bush where there is no effective enforcement by councils of building codes or hazard reduction.

The situation where a Government fails to govern is, of course, made worse when communities and individuals fail to self-govern. People building houses and choosing to live in the bush also have a personal responsibility – to look after themselves and their neighbours. This responsibility, it seems to me, has also been discouraged by modern governments.

The second explanation is technical. In recent years many European wildfire authorities have been seduced by the siren call of technology. This has lured them into a fatal trap. Their assumption is that any fire can be contained so long as they get it early and then have enough hardware to throw at it. This approach arose in the United States in the years after World War II, and is thus known to land managers as "the American Approach".

The American Approach is fundamentally flawed. Fifty years of its application in the United States and ten years in Australia and Europe has demonstrated that no ►

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► force of fire fighters in the world, indeed the fire fighting resources of the world could they be marshalled into one place, can stop a crown fire in heavy forest which is generating a jet-stream of spot fires downwind, each spot fire also landing in heavy fuels, and starting new crown fires. The best and the bravest men and women, armed with the most munificent, the most magnificent and the most expensive equipment, is totally overwhelmed.

This is a reality that still appears not to have penetrated the European wildfire generals and our political leaders. Not only have we seen the American Approach increasingly supported in Europe, and then watched as it invariably fails when pitted against multiple hot fires in heavy fuels..... despite this!..... it seems to have taken on a life of its own. Every year more money is poured into the purchase of super-expensive equipment, but the outcomes on the ground just get worse. Recently, Greek emergency services experts were launching new and strident calls for more and more expensive technology, completely ignoring the need for preventative measures.

Adoption of the American Approach has been accompanied by an equally disastrous institutional re-arrangement: the progressive transfer of wildfire responsibilities on public lands from land management agencies to the emergency services. In this scenario, beloved of politicians and wildfire generals, the focus of funding is shifted from preparedness and damage mitigation to emergency response. What this means in practice is less emphasis on fuel reduction and more on building up fleets of water bombers, tankers, and other high-tech fire fighting gizmos, an enormous paramilitary force (overseen by technocrats in head office) whose function is to put out fires after they start... but which is doomed to failure whenever they are faced with multiple fires burning in heavy fuels under hot windy conditions.

These new and deleterious institutional arrangements persist because they are supported by

powerful vested interests. The emergency services have a vested interest in maintaining a huge fire suppression machine and in making every fire – even an inconsequential fire – an emergency. I have watched over recent years as they have created a state of dependence on their fire fighting forces, which, when things go bad, they cannot deliver upon. And they have encouraged the belief in the public mind that all fire is bad and has to be suppressed or avoided.

Politicians also have a vested interest in the American Approach. It is easier and simpler to finance suppression systems than damage mitigation, and they can bask in the glow of measures which are highly visible to the public and the media, and give the impression that they are doing something useful, irrespective of the fact that it will not succeed under bad fire conditions. I ask you....how often have you seen a politician lighting the first match of a prescribed burn, compared with the occasions when you see them breaking the champagne over a newly purchased helicopter water bomber?

In saying this, I need to make an important point: I am not critical of the fire fighters on the ground, professional and volunteer. I know these people, and I know them to be brave, resourceful and tough. I admire them unreservedly. But they are increasingly being asked by their own leadership to do the impossible.

But what of the assertions from some groups that because of global warming, big unstoppable wildfires are here to stay, and we might just as well get used to them. I totally reject this line of argument. It is an insult to human intelligence and to the human spirit. If the computer projections are correct and it does become hotter and dryer, this means we have to make even greater efforts at fire prevention, further improve our state of preparedness and take even more serious measures to minimise potential wildfire damage. The idea that there is nothing we can do in the face of global warming but retreat into the fire shelter and wait

for the next fire to come at us over the horizon is defeatist and in the end, inhumane. And suggestions that everything will be OK if we only reduce our carbon dioxide emissions are surely an example of kindergarten-level thinking.

The need for mitigation of wildfire damage through fuel reduction by prescribed burning is absolutely central to effective wildfire management in central and Southern Europe. I support the concept unequivocally, although I set some clear parameters: burning must be based on sound research into fuel characteristics, fire behaviour and fire effects; burns must be conducted professionally by trained personnel using the best-available burning guides; and every burn must be part of an overarching strategic approach, the carefully designed and constantly updated jigsaw known as the Strategic Burning Plan.

This is how it is done in Western Australia, South Africa, Portugal, some parts of Spain and could be done in the rest of Europe. But even in West Australia, the system slipped in recent years, as foresters battled to keep a fuels management program going in the face of cunning opposition from environmentalists and compliant politicians.

Europe has also seen an almost complete abandonment of effective wildfire management on private land over the last decade, with local government opting out and no one else filling the vacuum. This is a situation people like me are trying to address as we speak. Would it not be better, we say to the government, to sort things out in advance, rather than after a disaster?

Nevertheless, 50 years of hard experience and world-class research has demonstrated beyond argument that while fuel reduction by prescribed burning does not prevent wildfires, it ensures fires do less damage, and it makes them easier and safer to extinguish. In gambler's terms, it shortens the odds in favour of the fire fighter. In human terms, it means people living in bushland areas where fuels have ►



The European fires of 2009 brought the wildland-urban interface in focus

► been reduced, are less likely to be burnt to death than are people living amongst heavy fuels.

Most parts of Europe are years behind Western Australia for instance when it comes to the critical business of fuels and fire management. There is a no need for new research to demonstrate the value of prescribed burning, as some academics are suggesting.

The need is to apply existing knowledge in a vastly expanded prescribed burning program on the lands that burn. The need is to upgrade the fire skills of field staff in parks and forests so that they can handle burns confidently and efficiently. The need is to develop comprehensive planning and control systems to ensure burning is professionally carried out, and the results are properly monitored and recorded. Above and beyond all this is the need for governments to recognise these needs, to act on them and to support their staff in the field.

And here's the rub. Based on history, you could be excused for asking will anything change, or will we

see just another revolution of the wildfire cycle?

My fear is that governments, however much they make the right noises, will in the end want to stay in office, and unless things change, this will mean pandering to those who (despite their current protestations) have consistently opposed responsible wildfire management.

My fear is that the forces who benefit from the status quo will already be marshalling their resources in its defence. These will include the wildfire generals who will not want to lose their power and influence, or to see funding going to land management (which they do not control) instead of new helicopters, water bombers and tankers (which they do).

I fear that all-knowing academics will emerge from their leafy campuses to tell us that actually there is no problem at all.... surely, everyone knows that killer wildfires are simply Mother Nature at work, or the planet's revenge for our despicable environmentally-unfriendly behaviour. This line will be pushed over and again, helping to massage the

consciences of politicians reluctant to make substantial changes to policies and practices which they think will be electorally unpopular.

Yes, I am fearful. But I am also hopeful (in a pessimistic way!) My intense hope is that **this** time things might change. Notwithstanding the whining of the effete intelligentsia, and opposition to change from the green bureaucracy, the powerful environmental groups and the emergency service chiefs, I think that this time it is going to be hard for the European / Greek / Spanish/ etc government to find excuses for doing nothing. In turn, I think that it is also going to be hard to ignore the carnage in Greece and Spain and the fact that fingers are being pointed very directly at the politicians and their wildfire generals.

I also think that the European Commission might finally decide that it is high time they reviewed their approach, which is basically one of rewarding EU member governments for failed land management. And I think that a great many local governments are going to realise that the planning buck stops with them... if they knowingly put people into ►

► danger through their town planning and environmental policies, and the people are then killed, they cannot escape accountability.

Finally, I think that this time, it will finally dawn on governments and their advisers that **in the Mediterranean bush, if you do not manage fire, you cannot manage anything else.**

Think about that for a moment. **In the Mediterranean bush if you do not manage fire, you cannot manage anything else.**

It is all very well to say that the management objective for our parks, forests and reserves is "protection of biodiversity", as most national parks agencies say these days. The trouble is, this objective cannot be achieved without first having put in place an effective wildfire management system. Where is the biodiversity today in those thousands of hectares of bushland without a green leaf to be seen, those "bare ruined choirs where no bird sings"?

It is the same in areas where the stated management priority is to protect water catchments. But to say this, and then adopt a strategy that allows fuels to build up until the day comes when the catchments are reduced to dead trees and ash - is blatantly self-defeating. And it is the same for every other land management objective, whether this be protection of aesthetics and lovely forest landscapes, protection of recreational areas, protection of commercial values and residential areas or the conservation of soil, remnant bushland and forests on farms or threatened species.

Therefore, the first rule of land management in Europe is this: get your wildfire management right, or be prepared to lose the lot.

I started this case study with a reference to World War I, and the futility of the strategies adopted by the generals throughout the first three and half years of the war. It is significant that the breakthrough in 1918, the new strategy, was designed by an Australian, indeed a Victorian, General Sir John Monash.

The Monash strategy was based on firstly establishing clear priorities and unambiguous objectives - he knew exactly what he wanted from amongst the options of what could be achieved. It was based on excellent planning, anticipation of difficulties and attention to detail. It was based on the advice of experts, men who had been at Gallipoli and in the trenches in France and Belgium, and who spoke from experience on the ground, not from ideology. Above all, Monash was not prepared to sacrifice human lives needlessly. With all of this behind them, the troops on the ground did the rest. Monash's new approach provided the blueprint for the end to the slaughter on the Western Front.

What European wildfire management is crying out for is a new General Monash, a leader who understands that the current approach has failed and is doomed to continuing failure, that the influential advisers have no front-line experience. An effective new leader will know that if we clarify and properly rank our objectives, listen to the voices of experience and the lessons of history, and act accordingly, the odds favouring success will be massively shortened.

But the great General Monash himself would not succeed without the support of prime ministers, premiers and ministers, prepared to stand firm behind him when the Greenpeace Society, the Bruxelles Intelligentsia and the media people gang up on him. A good response to this lot might be "Sorry, mates, we are doing what is best for Europe and its people, based on good science, experience and the word from the people who have most to lose". Politically incorrect, of course, but it is the approach adopted when it comes to defence of the country against external enemies and national security, and which most Europeans accept in that context.

Nor will a new general succeed without legislative and policy backing to enable land management agencies to win back the ground they have lost to the emergency

services. Our parks and forests agencies must be empowered and resourced to manage fuels, indeed they must be required to do so, if necessary by legislation. Europe must abandon the American Approach, replacing it with an Australian/African / European Approach, a system in which equal weight is given to prevention and suppression, rather than trying, helplessly, to pile all our eggs in the suppression basket.

For any of this to happen our political leaders need to hear from the people whose lives and assets have been sacrificed or recklessly put at risk by the failed policies of the past. It is essential that the people who have suffered demand systemic change, not just window dressing, more helicopters and overseas fire fighters. Unless they speak up, there is no chance they will be heard. Politicians will take the political way out.

I think we can say that the environmentalist approach to wildfire management, including reliance on aerial fire fighting, has been given a very fair go. It has had a good test. Regrettably, and predictably, the results reveal that it has been a failure. The **excuses** put forward, especially that fires are unstoppable because of global warming, are simply that: excuses. They do not allow for the capacity of intelligent humans to foresee a threat and to forestall it.

To conclude: the choices before us are straight forward: do Europeans, and especially in the south, want our wildfire and land management planning done by professionals with front-line experience, or by campus intellectuals and ideologists? Is it smarter to manage wildfire fuels by burning them at times of our own choosing when conditions are mild, or to stand back, do nothing and risk being engulfed by fire at the worst possible time? If fires are inevitable, which is preferable: a controlled or a feral fire? And do we see humans as part of the ecosystem and plan accordingly, or do we see them as interlopers, as illegal immigrants in the European landscape?

Do we opt for wisdom or for folly? ▲

US fire fighters to bike across country in honour of 9/11

A group of fire fighters in Milwaukee will be hitting the road on a cross-country 4 500 mile bike ride to New York City to honour fallen fire fighters and the 10-year anniversary of 9/11 reports Fire Rescue1.

2011 marks the 10th anniversary of this tragic event

“Fire Ride: Tribute 2011” is scheduled to begin in San Francisco on July 18 and end 60 days later in New York City on the morning of September 11.

The bicyclists are biking from station to station throughout the country, picking up fire fighters for parts of the ride and recuperating at local firehouses.

The ride started as something Mount Horeb volunteer fire fighter Chris Rupp, 22, a nursing student at University of Wisconsin-Milwaukee, wanted to cross off his bucket list, but it grew into something much bigger and meaningful.

“Fire fighting is known for its family atmosphere,” he said. “I saw how tight the fire fighter family truly is.”

September 11 is a critical date for the fire fighter family. “September 11 was the single biggest moment for US fire fighters. This tragic event increased the public awareness of the jobs of fire fighters, Rupp said, explaining why he is encouraging donations to the National Fallen Fire fighters Foundation and the Fire Department, City of New York (FDNY) Foundation in honour of the ride and cyclists.

Fire fighter Rupp has coordinated the final arrival with FDNY and has invited fire fighters who worked on 9/11 to bike the last stretch to the historic WTC site, hoping to arrive exactly 10 years after the tragic disaster. ▲



Colorado's FEMA Urban Search and Rescue members at the scene of 9/11

What's on?

April 2011

4 – 8 April 2011

11th International Wildland Fire Safety Summit

Where: Hilton Garden Inn, Missoula, Montana, USA

Details: www.iawfonline.org/missoula2011

12 – 14 April 2011

NFPA Mexico Fire Expo 2011

Where: Centro Banamex, Mexico City, Mexico

Details: www.nfpa.org/mfe

26 – 29 April 2011

MIPS 2011

Where: Expocentre Fairgrounds, Moscow, Russia

Details: www.mips-expo.com

May 2011

8 – 10 May 2011

Beijing International Disaster Reduction and Emergency Equipment Expo 2011

Where: China World Trade Centre, Beijing, China

Details: www.ecidrea.com.cn/en

9 – 13 May 2011

WildFire 2011, the 5th International Wildland Fire Conference Living with Fire, addressing global change through integrated fire management

Where: Sun City, South Africa

Details: www.wildfire2011.org



10 – 13 May 2011

Security and Fire Vietnam 2011

Where: Saigon Exhibition and Convention Centre, Vietnam

Details: www.construction-vietnam.com

16 – 19 May 2011

International Firex 2011

Where: Birmingham NEC, UK

Details: www.internationalfirex.co.uk

17 – 19 May 2011

Fire and Security Pakistan

Where: Karachi Expo Centre, Karachi, Pakistan

Details: www.firesecurity.com.pk

25 – 27 May 2011

EUROFIRE 2011

Where: The E'Cole Militaire, 1 Place Joffre, Paris, France

Details: www.eurofireconference.com

29 – 31 May 2011

International Conference for Fire and Rescue Executives

Where: Toronto, Ontario, Canada

Details: www.internationalfireconference.com

June 2011

9 – 10 June 2011

Sixth International Conference on Composites in Fire

Where: The Research Beehive, Newcastle University, Newcastle upon Tyne, UK

Details: www.compositesinfire.com

12 – 15 June 2011

NFPA Conference and Expo 2011

Where: Boston Convention and Conference Centre, Boston, USA

Details: www.nfpa.org

19 – 21 June 2011

Fire India

Where: NSIC Grounds, Okhala, New Delhi, India

Details: www.fire-india.com

20 – 24 June 2011

10th International Symposium on Fire Safety Science (IAFSS)

Where: University of Maryland, USA

Details: www.iafss.org

August 2011

23 – 27 August 2011

Fire-Rescue International (FRI)

Where: Atlanta, GA, USA

Details: www.iafc.org/fri

29 August – 1 September 2011

AFAC/Bushfire CRC Conference 2011

Where: Sydney Convention and Exhibition Centre, Darling Harbour, Australia

Details: www.afac2011.org

October 2011

4 – 6 October 2011

International Conference on Fire Behaviour and Risk Modelling

Where: Alghero, Sardinia, Italy

Details: www.iafss.org

9 October 2011

The Science of Suppression - a FIRESEAT Symposium

Where: University of Edinburgh, UK

Details: www.eng.ed.ac.uk/fireseat/

12 – 14 October 2011

Safety and Security Asia 2011

Where: Suntec Singapore International Convention and Exhibition Centre, Singapore

Details: www.safetysecurityasia.com.sg

14 – 17 October 2011

Exploring the Mega-fire Reality 2011, A Forest Ecology and Management Conference

Where: Florida State University Conference Centre, Florida, USA

Details: www.megafirereality.com

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