

# FIRE AND RESCUE INTERNATIONAL



Integrated fire, rescue, EMS and incident command technology

Volume 4 No 11

Official magazine of  
SAESI



## ADVANCED PETROCHEMICAL FIRE FIGHTING TRAINING



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### Editor

Lee Raath-Brownie  
lee@fireandrescue.co  
Cell 082 371 0190

### Advertising

advertising@fireandrescue.co

### Design and layout

Marc Raath  
marc@fireandrescue.co

### Digital newsletter

Pierre du Plessis  
pierre@fireandrescue.co

### Accounts and circulation

Vicki Jacob  
accounts@fireandrescue.co  
subs@fireandrescue.co

### Secretary

Vicki Jacob  
pa@fireandrescue.co

### Administration

Mirriam Moroane

### Contributions

#### SAESI

Melvin Ramlall  
Salomé van den Berg

#### USA

Wayne Bailey

#### Africa

Colin Deiner  
Rory Hodgkinson  
Neville van Rensburg  
Julius Fleischman  
Michelle Kleinhans  
Dr Neels de Ronde

# Comment

**Fire and Rescue International (FRI)** is proud to present its 47th edition. Enjoy the read!



Lee Raath-Brownie

### SAESI News

The SAESI News this month focuses on the SAESI qualifications where SAESI President Melvin Ramlall, addresses recent mainstream media coverage concerning SAESI qualifications. SAESI states that it is not an education service provider but a Quality Assurance Body and an IFSAC certifying entity. Ramlall also provides information of the benefits of being a SAESI member and the organisation's role within the fire brigade services in southern Africa. SAESI also provides a strategic overview of the institute including its vision, mission and values as well as insight into its governance and strategies.

### Cover profile

This month's edition features the South African Petroleum Refiners (SAPREF) first advanced petrochemical fire fighting course on behalf of the oil industry under the auspices of the South African Petroleum Industry Association (SAPIA). The South African Petrochemical Fire Chiefs' Committee (SAPFCC) has been instrumental in the development and presentation of the course for refineries in South Africa.

### Toughest Fire Fighter Alive South Africa 2018

We bring you the results of the Toughest Fire Fighter Alive South Africa 2018, which was held at the Roeland Street Fire Station in Cape Town on 10 and 11 August 2018. And the winner is.....

### Upcoming events

We provide information on two upcoming events ie the JOIFF Africa Fire and Explosion Hazard Management Conference 2019 that will be held in Secunda on 24 and 25 June 2019 and the Regional Advanced Integrated Fire Management Course in the optimum use of prescribe fire and regional fire prevention levels, which will be presented by Dr Neels de Ronde in Sabie, Mpumalanga, on 16 to 20 September 2019.

### Buying fire apparatus

Our technical expert, Colin Deiner, looks at the issues when purchasing a new fire appliance. Deiner discusses the engine and powertrain management, choosing a custom built vs a commercial appliance and highlights the importance of including the fire fighters that will be using the apparatus, in your decision.

### Rescue roundup

SAMRO's Julius Fleischman and Neville van Rensburg looks at the importance of wearing PPE on accident scenes, reminding readers of the benefits of wearing all your PPE, all the time to ensure a safe, healthy and happy life further beyond the emergency rescue services.

A huge thank you to all our contributors, advertisers and readers for their continued support! **Fire and Rescue International** is your magazine. Read it, use it and share it!

**Lee Raath-Brownie**  
Publisher

### Publisher

Lee Raath-Brownie  
FIRE AND RESCUE INTERNATIONAL  
Tel 011 452 3135/6 Fax 086 671 6920  
Box 8299 Greenstone 1616  
www.frimedia.org

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**This month's FRI Images winner!**

**Congratulations to**

Aldus Smith for his photograph 'Taking off' taken with a Nikon D750 on the following settings: ISO 100, focal length 70mm, shutter speed 30" and an aperture/F-stop of 10.0.

**Aldus Smith wins this months prize money of R2000!**

**Photo description:**  
EMS helicopter taking off.

**Well done!**

**Best rescue, fire or EMS photo wins R2 000!**

Fire and Rescue International's (FRI) monthly photographic competition is open to all its readers and offers you the opportunity of submitting your digital images of fires, fire fighters, disasters, incidents, emergencies and rescues.

**Rules**

- All photographs submitted must be high resolution (minimum 1 meg) in jpeg format
- 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

**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 incident
- Camera, lens and settings used

All entries must be emailed to:  
**lee@fireandrescue.co**

**>> ENTER NOW!**





# Spotlight on SAESI qualifications



SAESI President Melvin Ramlall

The status of the SAESI qualifications is under probe in one of the metros after a trade union wrote to its executive mayor questioning a senior executive appointment who it is alleged in his CV claimed that the SAESI Advanced (Associate) Diploma was at NQF 7 level. Subsequent to this, an internal correspondence was directed to all prescribed officers to route all queries in this regard to the office of the SAESI president. The oversight and mandate of aligning the SAESI qualification remains delegated to the SAESI presidency and the adhoc board task team since 2013.

### Discussion/deliberations/response

The issues ventilated within the mainstream media calls to public and questions the propriety of the SAESI Qualifications and whether or not it is registered with the South African Qualifications Authority (SAQA) on the National Qualification Framework (NQF) and whether or not the SAESI member misrepresented his qualification relationship against the NQF level in his job application. The latter probe falls outside the

scope of this response and remains an issue between the employer and the applicant.

It may, however, be of importance to strengthen member knowledge and public perception on the origins and true value of the Occupational Qualifications within the world of work.

### Where does the challenge really originate from?

The SAESI presidency recognises that although these challenges were raised by the trade union, the South African Municipal Workers Union (SAMWU), the agitation is prompted by a splinter group of members who are organised by faculty staff from the Tshwane University of Technology (TUT), venturing to establish a private business by purporting that qualifications outside the academic realm are invalid, improper and illegal and must be shut down so that it may further its ambitions to monopolise the environment from a perceived superior academic realm. Formal meeting requests by SAESI with the strategic level of TUT remain outstanding.

### Impacts, influence and response

The SAESI Presidency has since 2015 presented itself before SAQA, the Council of Higher Education (CHE) and the Quality Council for Trade and Occupations (QCTO) to answer to the above claim that SAESI is providing illegal qualifications.

The SAESI Presidency has put on record a 12 page response with a 71 page supporting bundle of documents before SAQA, which confirms that SAESI is not an education service provider but a Quality Assurance Body and an IFSAC certifying entity.

### The sector demands and the contribution made by the South African Fire Service Institute (SAFSI) in the National Sphere

The demand for the qualifications originated within the Fire Brigade

Services Act 99 of 1987 by the dominant municipal sector employer represented by the South African Local Government Association (SALGA) as a member on the Fire Brigade Board (FBB). SAFSI registered six occupational qualifications in 1983 with the Bureau for Research Support Services (BRSS). SAFSI forged an academic relationship with the Technikon Pretoria in 1992.

These qualifications were condensed to five levels in 1995, which was reassessed by the Human Science Research Council (HSRC). SAFSI continued its academic relationship.

SAFSI, as a member of the FBB, presented these qualifications, which were accepted by the Fire Brigade Board (FBB) as the prescribed benchmarked standard applicable for the dominant municipal employer to appoint a chief fire officer and a member of the service in terms of section 5(1) and 6(1) of the Fire Brigade Services Act.

These qualifications became entrenched in the job descriptions, progression and promotion and remuneration of fire fighters within the municipal fire services regulated through the South African Local Government Bargaining Councils (SALGBC) and was represented by the trade unions as parties with SALGA representing the various municipal employers.

These qualifications have also been voluntarily accepted by the industrial, petroleum, aviation, marine, military sectors responsible for fire and emergencies. SAFSI, in satisfying the sector demand for distance learning, entered a partnership with National College Limited (NCL) trading as Success College to provide distance learning in 1994. The academic partner Technikon Pretoria was included in the agreement.

SAFSI transitioned into the Southern African Emergency Services Institute



(SAESI) and extended its footprint into southern Africa as the sole certifying entity of IFSAC for the National Fire Protection Association (NFPA) proficiency programmes provided by municipal and private training centres. The NFPA remain the global standards used in over 100 countries, which are regulated by IFSAC certifying entities.

This partnership between SAFSI and NCL progressed from 1995 until 2003 and the agreement was terminated by notice of NCL citing non-viable market and a phased out transfer of the intellectual property owned by SAFSI was handed back to SAESI.



SAESI House in Krugersdorp

The reasons for departure involved voluntary participation and poor income generation for NCL and most importantly the difficulty for NCL to present SAFSI property for registration before SAQA. The changing political and legislative landscape resulted in the FBB becoming dysfunctional and thereafter not constituting, leaving SAESI with limited options.

In the meantime, the academic partner Technikon Pretoria in 2003 registered its own Fire Technology qualification with SAQA namely the; The National Higher Certificate at NQF 5 (Gr12+2 at 240 credits), The National Diploma NQF 6 (Gr12+3 at 360 credits) and The B-Tech at NQF 7 (Gr 12+4 at 480 credits). These qualifications were registered as full time study programmes.

SAESI continued relations with the Technikon Pretoria who transitioned to Tshwane University of Technology (TUT) and served on its advisory board and established a pathway for SAESI members to progress with their occupational qualifications vertically in to the NQF through the TUT.

Members entering the field of study realised that the academic curriculum within the faculty of science was misaligned by admitting a fire fighter and turning out a chemist who becomes unsuited to the world of work.

The anticipated influx was confined to the privileged members located

within and around the Gauteng Province whilst majority members still had and have no reasonable access.

SAESI has established many task teams to seek redress over the years and realised the mandate cannot be achieved in its current construct without becoming a registered university to bring an application before SAQA.

The members were resolute not to utilise member funds to start a business and deal with the complications of starting a business whilst being employed within the municipal sector.

SAESI has advocated for many years post 2000 with the National Disaster Management Centre (NDMC) to resurrect the FBB or for a National Fire College to be established. SAESI also advocated with TUT to provide distance learning and promises made have not been met to meet the sector needs.

The above facts forced a member-driven, non-profit institution expelling its own capital to sustain the inherited prescribed occupational qualifications in Fire Technology to ensure that the fire and emergency services remain sustained and does not collapse whilst its members from 11 branches situated around 28 training centres employed within the 283 established municipalities queue outside TUT for full time admission whilst drawing a public salary.

The SAESI presidency also recognises with concern the political pressure and restraints imposed on SAESI office bearers over a period of time from participating in SAESI activities to the extent that employment contracts of past presidents have not been renewed, office bearers and members were withdrawn from attending the 31st SAESI Conference, the reduction of the provincial funding commitment to the conference by 50 percent and the removal of financial support for member travel and time-off, to name a few. The SALGA MOU seeks to address this issue.

The economic reflection of the decision by members not to divert from the business practice of a quality assurance and certification body to a becoming an education service provider translates to members subsidised by the dominant employers to access credible occupational qualifications at approximately 10 percent of the costs levied by the institutions of higher learning.

Notwithstanding these orchestrated challenges by an undisclosed number of anti SAESI members, SAESI has made significant contributions towards stimulating the economic activity by hosting six consecutive conferences within the Gauteng Province and also invested in infrastructure to establish the SAESI House to serve as a business hub, which is accessible to stakeholders. ▶



## ▶ SAESI in the current landscape

SAESI is legally constituted as a non-profit company with an adopted Memorandum of Incorporation (MOI), which is governed by its second Board of Directors and is registered with the Companies and Intellectual Property Commission (CIPC) since 2014 and have in place the mandatory board committees for Nominations and Audit and Risk having independent chairpersons.

SAESI has also concluded a partnership agreement with the LG SETA as the Assurance Quality Partner (AQP) for the NQF 4 registered Occupational Certificate: Fire-fighter (98991) and are facilitating the Recognition of Prior Learning (RPL) project identified in the National Skills Strategy 3 to RPL between 80 and 100 members initially as a

pilot, to migrate into the new NQF 4 Occupational Qualification.

SAESI is recognised as the Community of Expert Practitioners (CEP) by the QCTO and will be included in all future qualification development within the sector.

SAESI is recognised as a Professional Body (PB) by SAQA and is also authorised to regulate the 'right to practice' by awarding the registered professional designation Fire-fighter Practitioner of South Africa [FFP (SA)].

SAESI is recognised and empowered by the NDMC Fire Services Directorate and have a strong working relationship making representations on all relevant platforms and the occupational qualification is

contained in the Municipal Staff Regulations (MSR) of 2016.

SAESI is recognised as a strategic partner of SALGA and has launched a Memorandum of Undertaking (MOU) that is under review, which, once accepted, will mitigate the hurdles experienced within the municipal sector.

SAESI has grown to become the largest IFSAC Certifying Entity that has voting rights outside of the United States of America that empower its 28 accredited municipal and private training centres in the provision of 70 NFPA programmes that are in high demand within the sector.

## What is SAESI doing currently for member benefit?

SAESI is working closely with the key stakeholders to professionalise the sector by regulating the right to practice and developing further occupational qualifications that promote lifelong learning in line with SAQA policies that will be registered within the QCTO sub-framework.

The formation of the CEP is therefore of critical importance for development that includes the external stakeholder involvement within the projected three-year target to finalise the development and registration of the NQF 7 level qualification with exit levels at NQF 6 and NQF 5 levels that incorporate the occupational curriculum.



# SAESI contact details



## SAESI head office contact details

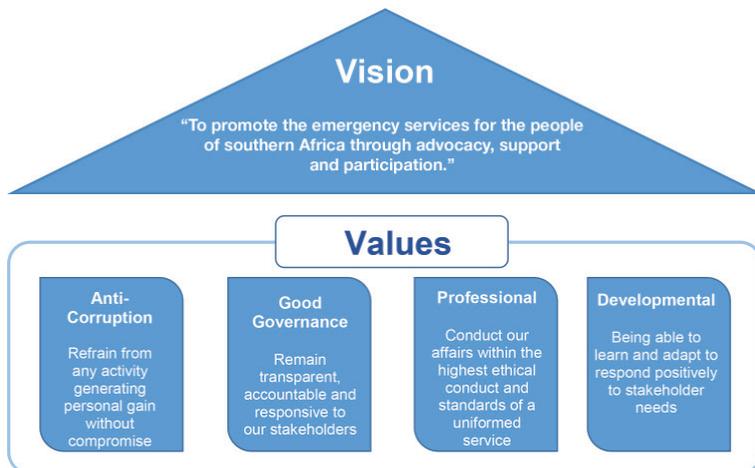
+27 (0) 11 660 5672 or  
+27 (0) 11 660 7555  
Fax Number: +27 (0) 86 544 0008 or +27 (0) 11 660 1887  
Email: info@saesi.com  
www.saesi.com

## Address

SAESI House  
295 Jorrisen Street, Off Voortrekker Road  
Monument, Krugersdorp  
1739  
SOUTH AFRICA



# The Southern African Emergency Services' (SAESI) strategic overview



## Mission

- Development of professional standards, policy and legislation within the field of emergency services
- Facilitate training and development of its members, the community and other relevant structures in the field of emergency services by
- Sharing and publishing relevant research and training materials
- Facilitating forums for discussion and dissemination of emergency services techniques, methodologies and information
- Serve as an organisational aid to promote the interests of its members as a whole and the emergency services, in pursuance of the objects of the emergency services
- Act independently in so far as their actions do not affect the general policy of emergency services
- Do all such other things as are incidental to or conducive to the attainment of all or any of the above objectives

The Southern African Emergency Services Institute (SAESI) is registered with the Companies and Intellectual Property Commission (CIPC) as a Non-Profit Company (NPC 2014/162285/08) on the 19 August 2014. On 6 December 2017, the South African Qualifications Authority (SAQA) officially recognised SAESI as Professional Body and registration of its professional designation, Fire Fighter Practitioner (SA) - FFP (SA) on the National Qualifications Framework.

### Governance

SAESI is incorporated in accordance with the Companies Act, 71 of 2008 and is governed by the provisions applicable to non-profit companies through its Memorandum of Incorporation (MOI), Board Charter and Company Rules on Ethics and Conduct. The SAESI board is committed to the principals and practice of integrity, accountability and transparency in dealing with its stakeholders.

### Strategy

SAESI has four work groups in place that are occupied by full time company officers from the head office that provides the secretariat and members elected into office for a four-year term to respond to its activities namely:

**The Quality Assurance Work Group (QAWG)** that focuses on two key outputs of assessment and accreditation of training services providers' and moderation and certification of training programmes in line with the International Fire Service Accreditation Congress (IFSAC) standards. SAESI has also created value in extending these training opportunities to the existing services providers to

advance the South African Local Government Sector Education and Training Authority (LG SETA) standards.

**The Events and Marketing Work Group (EMWG)** that focuses on sharing and publishing relevant research and training materials and facilitating forums for discussion and dissemination of emergency services techniques, methodologies and information. Its outputs are grandly displayed conferences and involve merchandising and media relations to maintain contact with our stakeholders.

**The Research and Development Work Group (RDWG)** that focus in the development of professional standards, policy and legislation within the field of emergency services. Its outputs involve participation, collaboration and advocacy within environments of the LG SETA, South African National Standards Authority on the National Building Regulations to develop new and upgrade existing standards.

**The Administration Work Group (AWG)** that focuses on the objective to act independently in so far as their actions do not affect the general policy of emergency services and focus on two key outputs of management of the companies' risks and conducting internal audits to ensure administrative and legal compliance.

The SAESI presidency carries the governance and strategic planning mandate of the Institute councillors. This happens conjointly with the executive committee of the Southern African Emergency Services Institute NPC. The board of directors' principal functions are:

- To determine the company's strategic direction to



- ▶ actively advance the objectives of SAESI as set out in the MOI
- To control the company, including risk mitigation, quality assurance and reputational management
- To ensure correct oversight, relating to working groups involving delegations of authority, regulatory compliance and terms of reference.

## Legislative and other mandates

### Constitutional mandates

The South African Constitution of 1996 as amended establishes fire fighting services as a functional local government matter in paragraph B of Schedule 4. The SAESI founding Constitution of 1959 specified key objectives, which remain embedded in the present Memorandum of Incorporation (MOI) adopted in June 2015 that focuses SAESI towards its vision to 'Promote the emergency services for the people of southern Africa'.

### Legislative mandates

#### The Fire Brigade Services Act, Act No 99 of 1987

"To provide for the establishment, maintenance, employment, coordination and standardisation of fire brigade services and for matters connected therewith" established in section 2 (1) The Fire Brigade Board and mandates SAESI in section 2(2), (b) to delegate four persons to perform the functions assigned in terms of this Act.

#### National Qualifications Framework Act 67 of 2008

To provide for the National Qualifications Framework; to provide for the responsibilities of the Minister of Higher Education and Training; to provide for the South African Qualifications Authority; to provide for quality councils; to provide for transitional arrangements; to repeal the South African Qualifications Authority Act, 1995 and to provide for matters connected therewith, in section 28 mandates that a professional body must cooperate with the relevant quality councils in respect of qualifications and quality assurance in its occupational field.

#### Protection of Personal Information Act, 2013 (Act No 4 of 2013)

To promote the protection of personal information by public and private bodies.

### Policy mandates

**The National Skills Development Strategy 111** (NSDS111) encourages and supports the better use of workplace-based skills development and increasing access to occupationally directed programmes that resulted in SAESI and the Local Government SETA (LG SETA) formalising a memorandum of understanding with the objective of stimulating and strengthening innovations, skills development, education and training in the local government sector.

### International Fire Services Accreditation Congress (IFSAC)

The IFSAC Certificate Assembly provides accreditation to entities that certify the competency of and issue certificates to individuals who pass examinations based on National Fire Protection Association (NFPA) fire service professional qualifications and other standards approved by the Assembly. SAESI remains a certifying entity since 1995.

### South African Qualification Authority (SAQA)

**National policy and criteria for designing and implementing assessment for NQF Qualifications and part qualifications and professional designations in South Africa:** to set minimum standards and provide guidance for effective, valid, reliable, fair, transparent and appropriate assessment that has integrity and is aligned to the NQF Act, Act 67 of 2008. The overarching goal of lifelong learning is for holistic personal development as well as for successful participation in society and in the economy. SAESI as an Assessment Quality Partner (AQP) of the LG SETA for the Occupational Certificate Fire-Fighter Practitioner.

### Level descriptors for the South African National Qualifications Framework

is to ensure coherence in learning achievement in the allocation of qualifications and part qualifications to particular levels and to facilitate the assessment of the national and international comparability of qualifications. SAESI as the established community of expert practitioners recognised by the Quality Council for Trades and Occupations (QCTO) will be involved in the further development of the qualification sub-framework.

### National Policy for the Implementation of Recognition of Prior Learning (RPL)

provides for the implementation of RPL within the context of the NQF Act 67 of 1995. SAESI has received funding by the LG SETA to conduct RPL of one hundred learners towards attainment of the occupational certificate.

### Policy on usage of SAQA Trademarks

#### Accredited provider

The certification, usually for a particular period of time, of a person, a body or an institution by a Quality Council as having the capacity to offer a specific education programme or trade and occupational learning programme that leads to a qualification or part-qualification registered on the NQF.

#### Recognised Professional Body

A status assigned to a statutory or non-statutory professional body by SAQA for the purposes of the National Qualifications Framework Act when it fulfils set criteria, including the registration of its professional designations(s) on the NQF.

# SAPREF presents first Advance Petrochemical Fire Fighting course under SAPIA umbrella



South African Petroleum Refiners (SAPREF) has presented its first advanced petrochemical fire fighting course on behalf of the oil industry under the auspices of the South African Petroleum Industry Association (SAPIA). The South African Petrochemical Fire Chiefs' Committee (SAPFCC), a sub-committee of SAPIA, has been instrumental in the development and presentation of the course for refineries in South Africa. The objective of the course is to develop fire fighting skills of refinery personnel in dealing with petrochemical fires as well to ensure sustainable fire fighting competence development and knowledge transfer to new personnel.

The advanced petrochemical fire fighting course first started in the 1980's at NATREF. The course has since been presented on an annual basis as Sasol Secunda. In recent years PetroSA has also presented a similar course. Refineries are a high

risk environment. There is a need for skills development with a specific focus on petrochemical fires as this is not readily available in South Africa. It is also critical for knowledge and best practice sharing and incident learning sharing amongst the refineries in the interest of protecting the lives of our employees.

The advanced petrochemical fire fighting course is the most desired course for any emergency responder to be on. Students are taught to fight petrochemical process fires from heat exchangers, pump seal, vent fires, line failures, pools, etc. 28 students from five refineries attended with 10 instructors. This is a high risk of the training course. Strict controls and discipline is essential to ensure the safety of students. The instructor to student ratio is also high to ensure personal attention and supervision.

One of the objectives was to build a strong team anchored in discipline,

which is critical during an incident. At the end of the course, these students are able to tackle any process fire the instructors would simulate. Students were in 10 kg+ fire fighting kit for 90 percent, from time to time with self-contained breathing apparatus of 10 to 12 hours a day, training on one fire simulator after another. An effective rotation system was in place to ensure that every student received balanced exposure to all facets of refinery petrochemical fire fighting.

Great teams are forged during difficult times and at the end of this course this was certainly the case. The course was concluded with a prize giving. For most students it was considered to be the toughest but most enjoyed and valuable course they have ever attended. These students go back to their refineries knowing that they will have the courage, confidence and knowledge to help protect human lives during an incident.







# Toughest Fire Fighter Alive South Africa 2018

The fifth Toughest Fire Fighter Alive (TFA) South Africa Open Challenge was held on 10 and 11 August 2018 in Cape Town. Hosted by the City of Cape Town Fire and Rescue Services at its Roeland Street Fire Station, the TFA SA 2018 saw 77 people participating of which 64 were male and 13 were female participants. There were 10 relay teams, two of which were female. The two-day event was administered by non-profit organisation Firefighters for Excellence with Mark Smith as the event coordinator.

Participating fire services included City of Cape Town, City of eThekweni, Eden District, Bitou Municipality, West Coast District, Mangaung Metro, Cape Winelands, Stellenbosch, Sishen Fire as well as a volunteer from Johannesburg and Volunteer Wildfire Services.

Sponsors included City of Cape Town Fire and Rescue Service, Fire and Rescue International, Dräger Fire, Southey Construction, Neil Jowell Trust and Jenny Wood.

The gruelling challenge consisted of four stages with fire fighters donned in full bunker gear ie fire helmet, fire tunic, fire boots and fire fighting gloves and self-contained breathing apparatus (SCBA).

- Station 1: Hose make-up and advance (hose drag)
- Station 2: Obstacle course
- Station 3: High-rise pack carry and hose hoist
- Station 4: Stair climb (23 floors at the Civic Centre)

### Results

Overall winner: Emile Conrad, Eden District Municipality

Overall female winner: Baigum Abrahams, City of Cape Town Fire and Rescue

Male Masters (Over 40): Mark Armstrong, City of Cape Town Fire and Rescue

Female Masters: Grace Masango, eThekweni Fire and Rescue

Male Relay Team: eThekweni Fire and Rescue

Female Relay Team: City of Cape Town Fire and Rescue

Mark Smith said, "This was one of the best TFAs held to date and the spirit of the teams were very high. It also assisted in increasing the public awareness with regards to the strenuous vocation of fire fighters."

Fire and Rescue International congratulates all the participants and especially the winners!!



## TOUGHEST FIRE FIGHTER ALIVE 2018

### City of Cape Town Fire and Rescue Services



Surname	Name	Age	Municipality	Stage1	P	Stage2	P	Stage3	P	Stage4	P	Total
<b>Female participants: Age 18 - 29</b>												
Abrahams	Baigum	W-18 - 29	City of Cape Town	03:18	00:05	04:02		02:49		05:24		15:38:00.00
Ngobobo	N F	W-18 - 29	eThekweni	03:27	00:05	05:00		02:42		05:24		16:38:00.00
Ngubane	K	W-18 - 29	eThekweni	03:30	00:05	05:00		02:47		05:33		16:55:00.00
Mathe	B P	W-18 - 29	eThekweni	03:30	00:05	05:00		02:47		07:03		18:25:00.00
Joubert	Feylin	W-18 - 29	City of Cape Town	03:38		Incomplete	09:00	06:53		07:20		26:51:00.00
Marais*	Duzell	W-18 - 29	Bitou Municipality	06:33		Incomplete	09:00	Incomplete	09:00	07:30		32:03:00.00
Venter	Alme	W-18 - 29	Sishen Fire	06:20		Incomplete	09:00	Incomplete	09:00	08:00		32:20:00.00
<b>Female participants: Age 30 - 34</b>												
Mpongose	P	W-30 - 34	eThekweni	02:39		05:13		02:36		05:22		15:50:00.00
Mcdonald	Chey	W-30 - 34	City of Cape Town	02:49		05:53		03:37		05:49		18:08:00.00
Mbanjwa	S F	W-30 - 34	eThekweni	03:08	00:08	Incomplete	09:00	02:17		05:44		20:17:00.00
Zitshu*	Lindiswa	W-30 - 34	Bitou Municipality	03:10		Incomplete	09:00	05:22		07:51		25:23:00.00

Female participants: Age 35 - 39												
Mileka	Mofokena	W-35 - 39	City of Cape Town (Kuilsriver)	03:27		Incomplete	09:00	04:23		08:39	25:29:00.00	
Female participants: Age 40 and over (Masters)												
Masango	Grace	W-40 - 44	eThekwini	03:41		Incomplete	09:00	Incomplete	09:00	05:58	27:39:00.00	
Male participants: Age 18 - 29												
Gumede	Simiso	18 - 29	eThekwini	01:43				01:25		03:20	8:34:00.00	
Kroon	Alno	18 - 29	City of Cape Town	01:34				01:22		04:13	9:28:00.00	
Smit	Juan	18 - 29	City of Cape Town	01:47				01:29		04:05	10:16:00.00	
Cele	SA	18 - 29	eThekwini	02:04				01:40		04:15	10:24:00.00	
Mohammed	Wade	18 - 29	City of Cape Town	01:48	00:05			01:40		04:28	10:39:00.00	
Gcwensa	S	18 - 29	eThekwini	01:47				02:12		04:36	11:16:00.00	
Moses	Aneeb	18 - 29	City of Cape town	01:45				02:30		04:05	11:21:00.00	
Lottering*	Edwin	18 - 29	Eden	02:25				01:37		05:21	11:53:00.00	
Mkrola	Thandisizwe	18 - 29	City of Cape Town	01:43				02:01		05:29	12:14:00.00	
Peterson	Granville	18 - 29	Stellenbosch	02:17				02:05		04:44	12:27:00.00	
Jacobs	Yaaseen	18 - 29	Stellenbosch	02:50				02:34		03:47	12:31:00.00	
Brand	Ruhan	18 - 29	Stellenbosch	02:14				02:25		05:06	12:50:00.00	
Berry	Nick	18 - 29	Johannesburg	02:54				03:32		02:18	13:28:00.00	
Baartman	Taswell	18 - 29	Stellenbosch	02:20				04:51		02:48	14:40:00.00	
Baadjies	Frans	18 - 29	West Coast District	02:22	00:05			03:32		04:47	15:16:00.00	
Jacobs	Bevan	18 - 29	City of Cape Town	02:08				04:30		02:05	16:18:00.00	
Poole	Justin	18 - 29	City of Cape Town	02:31				04:55		03:15	17:01:00.00	
Opperman	Ruaan	18 - 29	Stellenbosch	02:08			04:00	02:27		03:35	17:10:00.00	
Feyt	Divan	18 - 29	City of Cape Town	02:02		Incomplete	09:00	04:02		05:48	20:52:00.00	
Thlabedi	Mohapi	18 - 29	Sishen Fire	03:10		Incomplete	09:00	04:23		07:13	23:46:00.00	
Jacobs	Martino-Mariano	18 - 29	Eden	03:25				04:30	Incomplete	09:00	25:55:00.00	
Cloete	Christiaan	18 - 29	West Coast District	02:29		Incomplete	09:00	Incomplete	09:00	Incomplete	09:00	29:29:00.00
Jansen	Keanen	18 - 29	Cape Winelands	02:35			04:00	05:00	04:00	Incomplete	09:00	29:35:00.00
Bosman	Werner	18 - 29	City of Cape Town	02:54		Incomplete	09:00	Incomplete	09:00	Incomplete	09:00	29:54:00.00
Engelbrecht	Rushwan	18 - 29	West Coast District	03:30		Incomplete	09:00	Incomplete	09:00	Incomplete	09:00	30:30:00.00
Africa	Steve	18 - 29	City of Cape Town	03:30		Incomplete	09:00	Incomplete	09:00	Incomplete	09:00	30:30:00.00
Male participants: Age 30 - 34												
Conrad*	Emile	30 - 34	Eden	01:53				01:10		03:09	7:47:00.00	
Hendricks	Cheron Kurt	30 - 34	City of Cape Town	01:54				02:27		01:59	10:24:00.00	
Tlotleng	Lebogang	30 - 34	Mangaung	02:02				02:45		02:03	11:40:00.00	
Thwala	V	30 - 34	eThekwini	02:20				03:05		01:36	11:54:00.00	
Latief	Taariq	30 - 34	City of Cape Town	02:17				03:50		02:15	13:53:00.00	
Du Plessis*	Greshwin	30 - 34	Bitou Municipality	02:34		Incomplete	09:00	02:22		06:15	20:11:00.00	
Swanepoel*	Adriaan	30 - 34	Bitou Municipality	02:10		Incomplete	09:00	02:31		08:07	21:48:00.00	
Yawa*	Bongani	30 - 34	Bitou Municipality	03:02		Incomplete	09:00	03:11		06:37	21:50:00.00	
Kgosiemang	Denson	30 - 34	Sishen Fire	02:39		Incomplete	09:00	03:33		07:26	22:38:00.00	
Maswanganyei	Given	30 - 34	Sishen Fire	02:55		Incomplete	09:00	04:24		08:39	24:58:00.00	
Sehong	Makgetha	30 - 34	Mangaung	02:11			04:00	05:00	Incomplete	09:00	29:11:00.00	
Male participants: Age 35 - 39												
Mncwango	D	35 - 39	eThekwini	02:34				02:30		01:32	11:23:00.00	
Shinga	RS	35 - 39	eThekwini	02:08				03:20		01:47	12:54:00.00	
Mgumbeza	T	35 - 39	eThekwini	02:10				03:17		01:33	13:20:00.00	
Stoffels*	Deon	35 - 39	Eden	03:14				03:57		02:39	14:38:00.00	
Ruiters*	Faizell	35 - 39	Bitou Municipality	02:20				04:08		02:03	14:42:00.00	
Sikhosana	J	35 - 39	eThekwini	01:57		Incomplete	09:00	01:49		04:23	17:09:00.00	
Sinono	Lundi	35 - 39	West Coast District	02:37			04:00	05:00		03:18	19:45:00.00	
Mbalolo*	Mabombo	35 - 39	Bitou Municipality	03:07		Incomplete	09:00	01:42		06:50	20:39:00.00	
Goliath	Theodore	35 - 39	City of Cape Town	02:44		Incomplete	09:00	02:59		07:21	22:04:00.00	
Le Roux	Etienne	35 - 39	Volunteer Wildfire Service	02:41			04:00	05:00		03:41	22:49:00.00	
Finger	Philip	35 - 39	Mangaung	02:50	00:05	Incomplete	09:00	04:00	Incomplete	09:00	29:55:00.00	
Wehr	Alec	35 - 39	Cape Winelands	03:31			04:00	05:00	04:00	Incomplete	09:00	30:31:00.00
Mjana	S	35 - 39	eThekwini		09:00	Incomplete	09:00	Incomplete	09:00	Incomplete	09:00	36:00:00.00
Male participants: 40 and over (Masters)												
Armstrong	Mark	45 - 49	City of Cape Town	02:10				03:14		02:08	13:00:00.00	
Van Deventer	Russel	50 - 55	Mangaung	02:08				03:56		02:17	13:01:00.00	
Woolstencroft	Shane	50 - 55	City of Cape Town	02:12	00:05			04:13		02:12	13:28:00.00	
Mathee	M	45 - 49	eThekwini	02:27				03:28		02:00	14:57:00.00	
Pulumo	Ntsie	40 - 44	Mangaung	02:01				04:13		04:01	16:40:00.00	
Alberts	Kenny	45 - 49	Stellenbosch	03:13				04:39		03:35	17:39:00.00	
Leppan	DG	40 - 44	eThekwini	02:03		Incomplete	09:00	02:41		05:40	19:24:00.00	
Mzobe	TE	40 - 44	eThekwini	02:10		Incomplete	09:00	03:04		07:02	21:16:00.00	
Carelse	Jermaine	45 - 49	City of Cape Town	02:23		Incomplete	09:00	03:01		07:23	21:47:00.00	
Visser	Morne	40 - 44	Sishen Fire	03:00	00:10	Incomplete	09:00	03:24		06:59	22:33:00.00	
Rhenier	Arthur	45 - 49	West Coast District	03:52		Incomplete	09:00	03:17		Incomplete	09:00	25:09:00.00
Julius	BD	45 - 49	eThekwini	02:54		Incomplete	09:00	03:41		09:47	25:22:00.00	
Zietsman	Johan	40 - 44	Sishen Fire	02:43		Incomplete	09:00	04:46		Incomplete	09:00	25:29:00.00
Senekal	Bertus	45 - 49	West Coast District	03:42		Incomplete	09:00	04:13	00:05	08:57	25:57:00.00	
Mzangwe	Phumlile	40 - 44	Mangaung	02:37			04:00	05:00	04:00	07:29	28:28:41.00	
Female relay teams												
			City of Cape Town					11:50	00:10		12:00:00.00	
			eThekwini					22:39	00:05		22:44:00.00	
Male relay teams												
			eThekwini	06:02						03:03	9:05:00.00	
			Eden	05:44						03:52	9:36:00.00	
			City of Cape Town	05:27						04:21	9:48:00.00	
			City of Cape Town (Stellenbosch)	06:36	00:05					03:50	10:31:00.00	
			eThekwini	06:16	00:05					04:14	10:35:00.00	
			eThekwini	08:37						04:03	12:40:00.00	
			Bitou Municipality	17:09						04:33	21:42:00.00	
			City of Cape Town (Strand)	17:16	00:15					05:11	22:42:00.00	





# JOIFF Africa Fire and Explosion Hazard Management Conference 2019



JOIFF Management at the 2017 JOIFF Africa Conference

**J**OIFF, the international organisation for industrial emergency response and fire hazard management will be presenting its JOIFF Africa Fire and Explosion Hazard Management Conference 2019 on 24 and 25 June 2019. The two-day conference will be held at the Graceland Hotel, Casino and Country Club in Secunda. Pine Pienaar, retired chief fire officer of Sasol Secunda Emergency Services, is the South African organiser of the event.

The conference is designed to provide a unique opportunity to join with high-level international and regional fire and explosion hazard management specialists to listen, discuss and network with the world's and sub-Saharan Africa's foremost experts and

specialists on fire and explosion hazard management pre preparedness.

World-leading International and regional speakers from organisations such as United Nations, oil majors, regional politics, academic and technical specialists will provide a unique opportunity for attendees to learn, network and participate in this unique conference.

Delegates from various roles will be attending such as industrial fire chiefs, municipal fire chiefs, senior fire fighters, fire engineers, policy makers, regulators, fire safety consultants, fire risk consultants, occupational safety managers, process safety managers, safety and HSE managers, HSEQ managers, risk managers, security



Demonstrations at the 2017 JOIFF Africa Conference



JOIFF Management at the 2017 JOIFF Africa Conference

managers, operational managers and industrial safety and training managers.

The delegate package includes:

- Pre conference drinks, evening reception networking event
- Delegate pass for two-day summit
- All refreshments and snacks during summit breaks including buffet lunches
- Discounted accommodation rates at venue hotel (whilst rooms still available)
- Invitation to attend the gala dinner
- Invitation to attend demonstration
- Individual annual JOIFF membership (subject to approval)

Please note that available delegate places are limited and early registration is recommended. Accommodation is limited and selling out fast. If you have registered and wish to stay at the conference hotel, call the venue on Tel: +27 17 620 1000 and mention 'JOIFF' to obtain the discounted room rate.

Contact Paul Budgen, event director, for details on how you can sponsor or exhibit on **Email:** pb@edicogroup.net or **Tel:** +(0) 44 77 88 28 1357.

Visit [www.joiffconferences.com/conferences/joiff-africa-summit-2019/](http://www.joiffconferences.com/conferences/joiff-africa-summit-2019/) for more information and registration.



**JOIFF**



# JOIFF AFRICA FIRE & EXPLOSION HAZARD MANAGEMENT CONFERENCE – SOUTH AFRICA – JUNE 24th & 25th 2019

**“Diverse Challenges Facing Emergency Responders In Africa”**

Hosted By Pine Pienaar. Rtd. Chief Fire Officer Sasol Secunda Emergency Services & Supported By The Members Of The Petrochemical Fire Chiefs Committee. Gracelands Hotel Casino & Country Club - Secunda - **June 24th - 25th 2019**



JOIFF – The International Organisation for Industrial Emergency Response and Fire Hazard Management & Event Host Pine Pienaar – retired Chief Fire Officer, Sasol Secunda Emergency Services, would like to extend a personal invitation for you to attend the JOIFF Africa Fire & Explosion Hazard Management Conference 2019. The 2 day Conference is designed to provide a unique opportunity to join with High Level International & Regional Fire & Explosion Hazard Management specialists to listen, discuss and network with the World’s & Sub Saharan Africa’s foremost experts and specialists on F.E.H.M. Pre Preparedness.

## Delegate Package Includes:

- ✔ **Pre Conference Drinks - Evening Reception Networking Event**
- ✔ **Delegate Pass for 2 Day Summit**
- ✔ **All Refreshments & Snacks During Summit Breaks Including Buffet Lunches**
- ✔ **Discounted Accommodation Rates at Venue Hotel (whilst rooms still available)**
- ✔ **Invitation to Attend the Gala Dinner**
- ✔ **Invitation to attend Demonstration**
- ✔ **Individual annual JOIFF Membership (subject to approval)**

\*\*\* Please Note That Available Delegate Places Are Limited & Early Registration Is Recommended. \*\*\*

**TO BOOK YOUR PLACE TO SEE, MEET AND ENGAGE WITH WORLD CLASS SPEAKERS AND FELLOW DELEGATES GO TO [WWW.JOIFFCONFERENCES.COM](http://WWW.JOIFFCONFERENCES.COM)**

**For further details on Delegate Packages at the JOIFF Africa Fire & Explosion Hazard Management Conference 2019 please call or email Event Director Paul Budgen +44 (0) 203 286 2289 - Email: [pbudgen@edicogroup.net](mailto:pbudgen@edicogroup.net)**

## Who Should Attend?

Industrial Fire Chiefs – Municipal Fire Chiefs – Senior Fire Fighters – Fire Engineers – Policy Makers – Regulators – Fire Engineers – Fire Safety Consultants – Fire Risk Consultants – Occupational Safety Managers – Process Safety Managers – Safety & HSE Managers HSEQ Managers – Risk Managers – Security Managers, Ops Managers – Industrial Safety and Training Managers.

Co Sponsors

## Keynote Speakers



**ERIC YAPP**

Eric was appointed by the Government to be the Commissioner of the Singapore Civil Defence Force (SCDF) in February 2012



**RANDAL S FLETCHER**

F JOIFF currently serves as the Chairman of JOIFF



**JASON SERTORI**

Served as Chief Fire Officer with the United Nations Organisational Stabilisation Mission to the DR Congo (MONUSCO)

## Speakers

**Don Sheens:** Yassine Marine Services Training Centre, Tunisia

**Eric Laverne:** Williams/JCI, Texas, USA

**Colin Deiner:** Western Cape Disaster Management Center, South Africa

**Kevin Westwood:** BP Group Fire Advisor, UK

**Alec Feldman:** JOIFF Director, Ireland

**Graham Morrison:** Principal Engineer – Gexcon, UK

**Dr. Moses Khangale:** National Disaster Management Center – South Africa

**Dr. Richard Walls:** Senior Lecturer – Stellenbosch University, South Africa – Fire Engineering Research Unit

**Mr. Njabulo Zimba:** Director – Structural Engineering, Watson Structural Engineers, South Africa

**Renay Sewpersad:** Managing Director – Fire Protection Association, South Africa

**Dr. Moses Khangale:** National Disaster Management Center – South Africa

**Dr. Richard Walls:** Senior Lecturer – Stellenbosch University, South Africa – Fire Engineering Research Unit



**BRISTOL**

# Purchasing new fire apparatus

By Colin Deiner, chief director, disaster management and fire brigade services, Western Cape Government

*Most important is to consult the fire fighters who will use and maintain the vehicle and management who will plan the operational strategies for the department*



So the time has come for your department to purchase a new fire engine and you are tasked with the project. What could be an exciting challenge at the start might turn into somewhat of a nightmare as you go through the various stages from budgeting-specifying-construction-delivery and realise that it might not be turning out the way you originally intended or that you might not be fulfilling everyone's expectations. Remember that in this country (and many others) a fire truck is a rare purchase. They are expected to work for many years and, depending on your department's culture, become part of the fire station family. So how do you go about this?

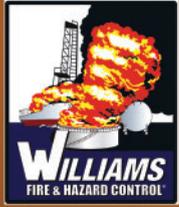
## It's a team effort

The first thing that you should realise is that you should not be alone in this process. There are a number of stakeholders that need to be included. The first and most important are the fire fighters who will use and maintain the vehicle. They need to tell you what their challenges are when they respond to incidents, what are the roads like, what call-outs do they respond to regularly, what are the most common risks, what would they like to see on this unit that wasn't on previous apparatus. This will guide you in deciding the size and height of the vehicle,

compartment configuration, types and location of hoses etc. If you are buying a ladder truck, the layout of the multi-storey buildings it will be expected to respond to, will be important. Are these buildings street front structures or office parks set on landscaped lawns? This will say a lot about the outrigger configuration of the apparatus.

You also need to include management, the people who will plan the operational strategies for the department. The type of equipment (vehicle) you buy must fit the strategy of the department. You should also include your maintenance people. In a municipal environment, the workshop folks will do most of the minor maintenance work. There will, however, be a fair number of tasks that will require specialist maintenance and it will be important to know that this kind of service is available in your city or close-by.

Also, make sure that you have sufficient training capacity in your department to train your staff on the apparatus. Usually the vendor will do training on the apparatus shortly after it is delivered. Make sure you have some experienced staff go through this initial training in order for them to pass it on to all members in time. Pay particular attention to the routine maintenance aspects, ▶



# Industrial Fire & Hazard Control

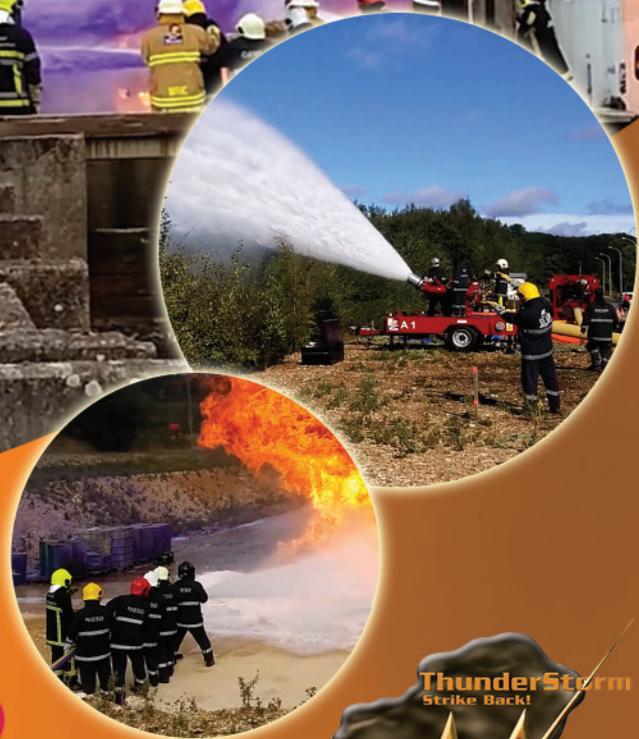
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*Compressed air foam systems (CAFS) represented a quantum leap in the science of fire fighting*

- ▶ which have to be done regularly. Pump tests, lubricating ladder extensions and other tasks that, if not done correctly, could be very costly down the line.

The acquisition process could become your biggest headache, so make sure that you have the supply-chain people on board from the get-go. We all know that in South Africa the spectre of under-expenditure on annual budgets loom large and are not going to leave us. It is therefore important to set out a clear plan with timelines as to when the tender process is to get underway, when the bids received will be adjudicated, when the contract will be awarded and when the vehicle will be delivered. Build in time for possible delays and the chance that the vehicle might have to be returned to deal with any potential snag-lists.

Twelve-months can be an extremely short period to embark upon a tender process, adjudication of bids, awarding of contract and construction, supply and delivery of the unit. As much as you must be assured of the quality of the product, also ensure that the vendor is able to deliver it within the specified time.

Your team should not be dissolved once the contract has been awarded but should continue to function throughout the construction period of the apparatus. Any changes in the original specification or requests/recommendations from the vendor, must be considered by the entire team.

### **So where do we start?**

The most important consideration is to establish what the apparatus will be used for. Dumb question? The first consideration for a standard engine will be its utilisation in a structural fire situation. You will consider the number of crew required as per your department's standard operating procedures (SOPs), the position of your pre-connect attack-lines, equipment placement etc. Don't forget that you also need to appreciate that the unit will also be used for a number of other emergency calls such as emergency medical emergencies, hazardous materials (hazmat) incidents, vehicle extrications and other non-emergency special services.

If the unit is going to be used for a combination of tasks ie rescue-pumper or hazmat-pumper, ensure that there

is sufficient compartment space to accommodate all the additional equipment you may need. If the unit is a first responder to hazmat incidents, you will only be able to carry a limited amount of protective gear, safety equipment and some product control kit on it. A large hazmat incident will not be as forgiving and you will have to respond your service's hazmat unit for those.

Vehicle extrications will require (at the least) a hydraulic rescue set ie cutter, spreader, rams, power unit/pump, hydraulic hose or you might want to opt for an electrical system that will take up less space, medical equipment such as backboard, spinal mobilisation, suction unit, defibrillator, splints, medical jump-bag etc, power-driven hand tools like reciprocating saws, air chisels etc and a bunch of high-pressure lifting bags. You will also have to allocate space for a fair amount of shoring timbers. I appreciate that this becomes a bit much to carry on one unit (together with your fire suppression kit) but you need to ask the question, "Can I achieve an effective extrication with the equipment I have on the apparatus?" If not, don't cut back on your kit you have on the vehicle. Either look at your tactics or try to cut down on what you usually put on the unit. Improvise!!

Your departmental SOP document is the mandate given to your officers and fire fighters on how to respond and manage any incident they respond to. It is therefore important to make sure that you have adequate crew compartment space to cover your pre-determined attendance and all their gear. Fire fighters carry much more gear on their person nowadays, than in the past. You need a cab big enough to accommodate these members as well as the gear they will be carrying the moment they get out of the crew cab. I have often recently seen new vehicles delivered with very narrow crew cabs. These are not conducive to effective response. More fire fighters die or are injured in this country in accidents responding to or returning from incidents. Cab integrity is a very important part of the vehicle construction. Do not compromise on this. More on this later.

Essentially, you will be purchasing the unit primarily for fire suppression operations. Today's structural fires are burning hotter and faster than ever before. The introduction of compressed air foam systems (CAFS) represented a quantum leap in the science of fire

fighting, however, it has, in many countries, been slow to find traction. The ability of CAFS to provide both a level of heat reduction and reduced extinguishment time that is far superior to that of plain water must be appreciated and must be a prime consideration when a new vehicle is specified. CAFS also has the advantage that by applying a good blanket of class-A foam over an exposure, you have effectively removed that problem from your list and are able to redeploy any resources you might have been using for that task.

The late former fire chief of the city of Phoenix, Arizona Fire Department in the USA, Alan Brunacini, is on record saying that any new pumper not equipped with a compressed air foam system is obsolete before it runs its first call.

The less water you need for fire attack, the less you have to use and therefore the less water you have to carry on the rig. In a country that is suffering from severe water challenges, this is a huge advantage. You will also achieve a quicker knockdown. This will greatly assist a balanced fire attack and could allow you to economise on your ventilation equipment. A rapid knockdown will limit the number of fires that will reach flashover stage and, therefore, less risk to your hose teams. CAFS hose lines are also much lighter and more manoeuvrable than conventional hose lines. It must, however, be appreciated that a fair degree of training and maintenance goes together with the use of CAFS. If it is not part of your fire fighting strategy to carry out rapid, balanced attacks with quick knockdowns (supported by good ventilation), you should think carefully about specifying CAFS as a feature.

It will definitely be worthwhile to reference NFPA 1901: Standard for Automotive Fire Apparatus, 2016 Edition, which provides outstanding guidance. You will find "Annex B of the standard, Specifying and Procuring Fire Apparatus". If you are acquiring a number of vehicles for more than one station, you should take into account that a combination of them could respond to the same major incident at the same time. Take care then to ensure that the same types of vehicles are constructed and equipped in the same way. This will eliminate confusion on a fireground and allow the incident commander the dexterity of deploying units from the primary staging area directly to its most advantageous position. In your mutual aid area, it is important that you have a vehicle typing system in place. The incident commander will be aware of what is coming his/her way and it will make it so much easier to properly deploy the necessary resources into the right places.

### Engine and powertrain management

When an emergency vehicle responds to an incident, it often is taken to the limits of its capability. Cold starting, rapid acceleration, harsh braking and continuous operation of the engine while the vehicle is stationary (during pumping) are some of these extremes that will place stress on various components of the vehicle. It doesn't take a rocket scientist to maintain and repair modern truck powertrains but it does take specialists with knowledge, experience and good diagnostics that can access the on-board systems.



*It is important to consider the safety features when choosing between commercial chassis/cab configuration and custom built*

Modern diesel technology requires a high level of awareness of what is going on beneath the engine cover; also, the braking patterns of the driver could be vital in determining the possible causes of overheating, which may have led to an accident supposedly caused by 'brake failure'.

Make sure you specify an effective electronic diagnostic system in your bid specification. It will be of great value on a number of fronts. It will make you aware of certain bad driving practices, engine performance issues and braking problems that may arise.

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# Buying fire apparatus

## ► Custom vs commercial

The current economic climate that we are experiencing is placing a heavy burden on fire departments to utilise their budgets to the maximum and try to get the most for the available funds they have been allocated. The cost of a custom-built fire engine is significantly higher than purchasing a commercial freight chassis and building a cab and load body configuration onto it. This is probably the biggest consideration when these decisions are made.

In South Africa, we are also limited to the regulations of the Department of Trade and Industry (DTI), which limits the percentage of imported content on products (this includes fire trucks).

Before the final decision is made, it is necessary to look at the big picture. Cost should not be the only consideration (although it might be extremely difficult). Will a commercial chassis/cab configuration have the same safety features? Will a truck built on a commercial chassis give you the same years of service as a custom? Will the brake systems, power-to-weight ratio and chassis frame rails provide the necessary performance required of the vehicle? Does the cost-of-ownership of the vehicle substantiate the savings made on the original purchase?



Horses for courses

If you go onto the websites of most of the big truck engine manufacturers, you will inevitably come across a section offering engines made specifically for fire engines. Why is this important? The answer lies in the fact that the standard freight truck engine was designed for a specific purpose, travelling under a controlled speed for a specific distance where after it is turned off, refuelled and then either continues its journey or is parked for a period of time. Fire pumpers don't have that luxury. It is often required of fire engines to hard start in very hot or cold conditions and proceed at speed to an incident where it will be required to be stationary while the power take-off (PTO) is engaged and the pump is operated off the engine for (sometimes several) hours.

I have previously mentioned crew space. A typical 4-door commercial chassis seats five people. Considering that additional space will be required for the breathing apparatus (BA), this could cut effective space down significantly. A custom chassis is designed to include breathing apparatus seats and would generally comfortably accommodate six people with five BA seats.

It is simple, normal freight chassis were simply not designed for fire service applications. A custom-built chassis/cab configuration is built as a single unit, focussing on the maximum safety margins and operating efficiency. They have an inherently higher power-to-weight ratio, which keeps them well within the necessary safety margins. A commercial chassis will generally have an independent cab configuration and in many cases, manufacturers will be required to extend the crew cab to include the desired number of fire fighters. This is usually done by removing the rear bulkhead of the existing cab and extending it from there. What does this do to the structural integrity of the cab?

The driveline alignment on a custom unit will, through its heavier and purpose designed frame rails, better accommodate the fire pump installation and PTO configuration. All of this will need to be retrofitted on to a commercial unit.

Consider that the lifespan of a custom chassis could be up to 20 years while the ongoing maintenance and repairs to the brake systems and other stresses on a commercial chassis being loaded to the edge of its capability will severely limit its lifespan. The cost of ownership should be a major factor when deciding on the best chassis to purchase. In the long run you could end up paying more for your "cheaper" commercial chassis.

## In closing

There is a myriad of websites on the internet giving advice and sharing opinions on the subject of custom vs commercial chassis. None of the ones I have researched have shown a preference for commercial chassis over custom (except for pricing). As a fire service, we must make the decisions with our main priority uppermost in our minds: the safety of our fire fighters. ⚠

# What's your justification for not wearing PPE on accident scenes?

By Julius Fleischman and Neville van Rensburg,  
World Rescue Organisation (WRO) assessors and members

**A**re we lazy, unworried or maybe just unwise when it comes to wearing our personal protective equipment (PPE) at all times?

When an accident occurs at an accident scene and an emergency medical technician (EMT) official gets hurt, a quick assessment of the situation might find the EMT wasn't wearing proper PPE or wasn't following procedures. This could lead the accident investigators to conclude that the EMT in question needs to be reminded about complying with safety policies.

So! We haven't always used our issued personal protective equipment when we should. Even worse, we don't have any excuses for those incidents when we didn't properly or completely wear our PPE.

As EMTs, we received excellent training from our training academies and instructors that constantly repeated and stressed the importance of using the proper PPE for every situation; emergency or non-emergency.

- Forgot your helmet near the burning building? Ten push-ups please.
- Self-contained breathing apparatus (SCBA) waist straps dangling unbuckled? Ten push-ups please.



- No gloves while packing a hose? Ten push-ups please.

Therefore, we quickly learnt our lesson and always wore the correct PPE during our training. But we forgot that significant lesson soon after graduation and we practice, perform and knowingly place ourselves in dangerous incidents with less PPE on.

We have to realise that wearing all our PPE, all the time, is an absolute requirement if we wanted to have a safe, healthy and happy life further beyond the emergency rescue services.

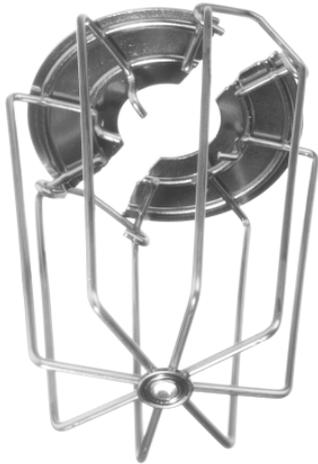
Sometimes we forget this important detail because we're in such a rush to save lives that we can't spare a minute to properly don all our gear or it doesn't look 'cool' to wear the chinstrap of the helmet. Don't be unwise, don't make excuses and use your PPE the right way, every day!

We are all intimately familiar with the phrase "Safety for me, safety for my crew and safety for my patient", which is ingrained onto our consciousness during every aspect of training. Nevertheless, every year some people die trying to save the lives of others, many others are hurt or injured and almost all emergency personnel will be able to recall a lucky escape from some kind of injury. What goes wrong and how do you prevent such incidents?

In theory, accidents can be prevented by ensuring a safe working place and a safe working practice. If this truly were possible, then personal protective equipment ie PPE, helmets, goggles, etc should be unnecessary. Unfortunately, at accident scenes both safe working place and safe working practice can



# Tyco EG-25 sprinkler guard from Johnson Controls is first listed guard to meet FM Global design guidelines



**J**ohnson Controls announces that its Tyco EG-25 Sprinkler Guard is the first FM-approved guard on the market to meet FM Global design guidelines and National Fire Protection Association

(NFPA) requirements for using a listed guard in areas where sprinklers are exposed to potential damage.

The new sprinkler guard is designed for use with TYCO ESFR-25 pendent

sprinklers. These sprinklers provide suppression load performance with ceiling-only fire protection for a wide variety of commodities and storage arrangements, enabling building owners to lease to the widest range of occupiers. When used in in-rack applications, such as the FM Global design guidelines, the ESFR-25 can be combined with the EG-25 guard to help protect the sprinkler from damage that is common to in-rack sprinklers.

The guard's welded assembly is fabricated from carbon steel, providing protection from mechanical and/or physical damage, including the installation of rack storage sprinklers. The guard does not require any regularly scheduled maintenance; however, proper installation of the EG-25 should be verified during the annual visual inspection of the sprinkler. ⚠

► be unavoidably compromised, so appropriate PPE is essential.

The first few minutes of any complex scene, especially a motor vehicle collision, are critical. Emotions are high and the environment is extremely unforgiving. The priorities we address or fail to address in those first few moments, guide the direction of the scene for the duration of the call.

When uninformed EMT personnel fail to wear proper gear, over time, they become either overly confident in or form overly critical of the need for them to wear full PPE. The personnel start feeling either invincible or laid-back towards PPE, thinking, "I haven't been hurt after everything, so why waste time gearing up".

Making a statement like that virtually guarantees that something will go wrong, eventually. Remember,

the EMT profession is a risky and dangerous business.

No one wants to get hurt or injured.

The yahoos who believe they can get away without properly using all PPE available, have never been hurt or injured. If they had, they'd be humming a different tune. Those who have been injured never want to be hurt again.

Overconfidence provides a false sense of security that can and has, ended in tragedy. Constant training and education related to policies as well as current events related to EMT personal injury and death can minimise the negative outcomes caused by negligence.

As a community of medical rescue practitioners, each of us has that call you think of when you quietly said under your breath, of the patient, "Idiot!" This is that scene, with some

variation of circumstances, where a person operating a piece of equipment decided after working with it for a long time, that they are experienced enough and the risk therefore is low enough, for them to go and stick their hand into the moving parts (I've done it a 100 times before...). Sound familiar..?

When it comes to the EMT's safety and well-being, it may be as simple as properly wearing your PPE.

Unsafe behaviours do cause many accidents but EMTs for the most part aren't ignoring safety procedures because they are lazy or don't care about safety. In most cases there are many legitimate reasons that unsafe behaviours and conditions exist and it's your job to figure out what those root causes are.

Once we do, we will be on our way to creating a more effective safety environment for ourselves and the patient. ⚠



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# Incident Command Post (ICP) VS Emergency Operations Centre (EOC)

By Michelle Kleinhans, managing director, Dynamic Incident Management

Since South Africa adopted the Federal Emergency Management Agency (FEMA)-based Incident Command System within the emergency response arena, started with veld and forest fire fighting and quickly moved from a Fire Management System to an All Hazards Incident Response system within the country, one should ask the question what is the reason for still using the term Joint Operations Centre (JOC) on larger more complex incidents (non-military incidents) instead of the term Emergency Operation Centre (EOC)?

In a National Incident Management System (NIMS) and within the Incident Command System (ICS), one will not easily find the term 'Joint Operations Centre' or 'JOC' as sometimes prefer to refer to during larger more complex incidents. This term is used in the military arena or when managing major events.

A NIMS and within ICS (a sub-component of a NIMS) during larger/complex incidents, one would rather use the term Emergency Operation Centre (EOC), instead of 'JOC' to coordinate and NOT to manage the incident. Let us explore the differences between an incident command post (ICP) and an emergency operations centre in more detail.

## Incident command post

The incident command post (ICP) is located at or in the immediate vicinity

of the incident site and is the focus of the conducting of direct, on-scene control of tactical operations. Incident planning is also conducted at the ICP. The ICP may be collocated with the incident base camp. This is the location (ICP) where the incident commander (IC) and his/her incident management team such as command and general staff, is located and from where they direct ALL tactical operations and incident management, whether it is from a first response vehicle or in a full incident command post located in a building or an ICP within a base camp.

## Incident management team

An incident management team is a group of highly skilled and trained personnel that work as a cohesive unit during the phase of an incident, often in support of a specific community or region and with a specific delegation of authority.

On the other side of the coin is the emergency operation centre (EOC).

## Emergency operation centre

An emergency operation centre (EOC) is a place removed from the incident and this centre fulfils a coordination function and NOT a command function. Within the EOC various agency representatives could be found where they discuss: priorities, resources, public information, agency policy and provide coordination and guidance functions to the incident commander (IC) and his/

her team at the ICP. A joint information centre (JIC) may be housed at the EOC and in many situations all or some of the resource order would go through the EOC.

Notice the word 'coordination' thus EOCs are more about coordination than command and control.

Decisions made at the EOC affect the incident response as well as the public response. The decisions made at the EOC are not tactical decisions; tactical decisions are made by the incident commander and the command staff at the incident scene from the incident command post.

The critical role of the emergency operation centre is:

- Supporting incident commanders
- Supporting other communities or jurisdictions
- Coordinating resources
- Developing situational awareness
- Informing the public

When we use correct and generic terminology, we will make a difference in every single important role during large/complex incidents from coordination, guidance from an emergency operation centre and from directing and managing the tactical management of the incident from the incident command post.

Together we can make a difference!

In summary, the difference between an incident command post (ICP) and an emergency operations centre (EOC) is:

Incident command post (ICP)	Emergency operations centre (EOC)
Works at tactical level focusing on the specific incident only	Works at a strategic level focusing on the big picture of the incident. It does not have the operational focus
It is located near the incident	It is not located at the incident place
Is responsible for operational activities	Provides resources, coordination and guidelines



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# Two local fire fighters win international award



Deon Esau and Jocelin Flank visited the Fire and Rescue International stand at Securex/A-OSH Expo with their awards

Two City of Johannesburg Emergency Management Services (CoJEMS) employees have received the Integrity Idols South Africa 2018 award for their extraordinary contribution to youth development. Station commanders Jocelin Flank and Deon Esau were among the top five nominees to have received this reward. Integrity Lab South Africa hosted the first ever Integrity Awards at the Artscape Theatre in Cape Town.

Together, Flank and Esau initiated the South African Fire Youth Academy to develop the next generation of EMS responders. The two have for the past 14 years, devoted their time and personal resources to empower young people between the ages of 12 and 18 with basic skills in fire and water safety, life, leadership and communications skills.

Every year, commanders Flank and Esau and their team take on 220 aspiring cadets and train them at the Florida Fire Station. Many of the cadets are from poverty-stricken communities and indigent families. For about eight hours every Saturday and Sunday, the children commit themselves to

learning life-saving skills that will advance and impact their lives and the lives of the people around them in a positive manner. Once the cadets have completed the full programme and reach the age of 18, they become eligible to enrol in the EMS Explorer Programme for the full preparatory training to become qualified fire fighters or emergency medical technicians.

The academy has remained a pillar in the community for the past ten years and continues to role model ethical servant leadership within the public service.

"The life-changing contribution by commanders Flank and Esau to the lives of young people is immense. They have saved hundreds of young people from falling into praying hands and drug addiction. Instead, these young men and women will have competitive advantages to live a better quality life and uplift the communities around them," said City of Johannesburg Member of the Mayoral Committee for Public Safety, Michael Sun.

Since the inception of this programme, many of the cadets and explorers have become qualified fire fighters and EMTs.

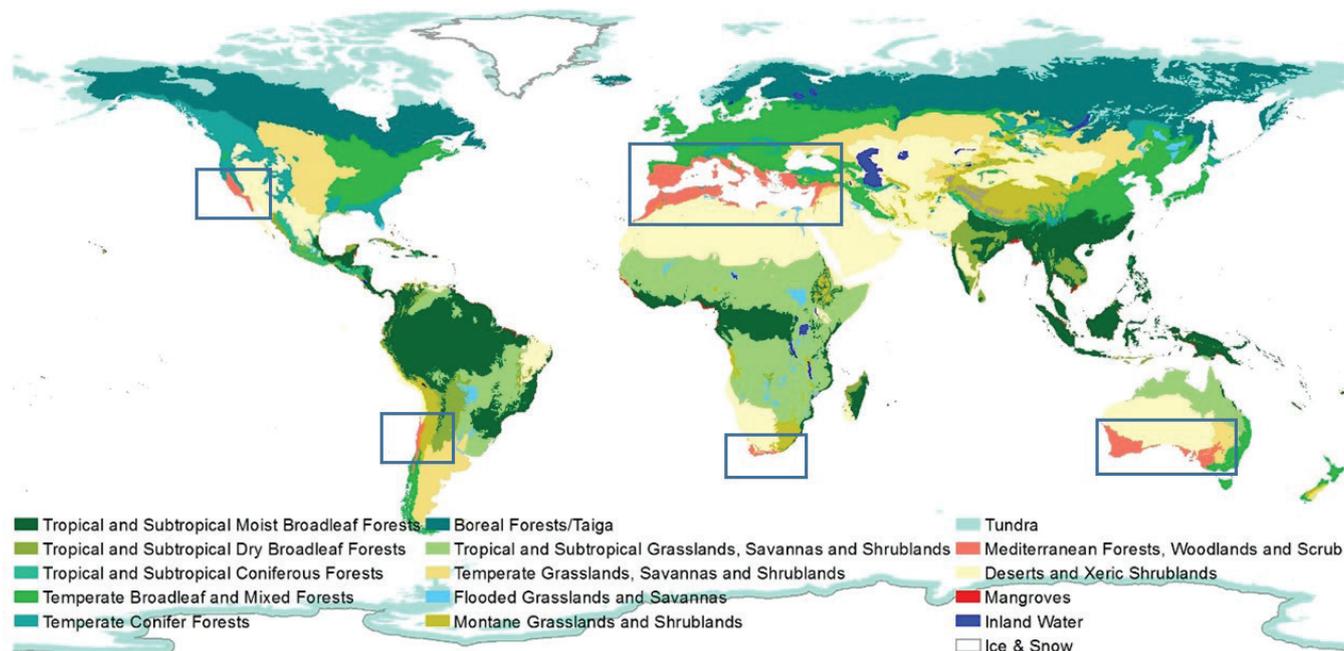
Flank said, "It is humbling to be recognised for the work we have done. When we started this project it was not for the praise but to change the lives of young people. I am very honoured and encouraged by this award."

Esau added, "It's incredible to be among such great leaders of our society, who do their best every day to impact positively the lives of others, sharing a stage with these awesome people is amazing."

Fire and Rescue International commends Esau and Flank for their inspiring programme, giving back to communities and investing their time and effort in developing young leaders. ▲



# Regional Advanced Integrated Fire Management Course in the optimum use of prescribe fire and regional fire prevention levels



16 - 20 September 2019, Sabie, Mpumalanga Province, South Africa

The Regional Advanced Integrated Fire Management Course in the optimum use of prescribe fire and regional fire prevention levels will be presented by Dr Neels de Ronde of Silva Forest Services from 16 to 20 September 2019 at Ligna Lodge in Sabie, Mpumalanga, South Africa. The event is organised and sponsored by:

- Silva Forest Services, Sedgfield, South Africa
- The Global Fire Monitoring Centre (GFMC)
- International Wildfire Preparedness Mechanism (UNISDR - IWPM)
- Major Hazard Agreement of the Council of Europe (EUR-OPA)

## The reality of increasing wildfires at a global scale

As a result of the reality of climate change, unchecked vegetation/fuel accumulation and ignorance of fire-ecological requirements, particularly in the Mediterranean zone-biome, fire hazard levels have now reached alarming proportions in countries of Europe, Africa, the Americas and Australia particularly in the Mediterranean forests, woodlands, shrublands and grasslands. This is including the increased fire hazard levels in introduced, exotic forestry plantations; invasive or purposely planted. This also goes hand in hand with a prevailing lack of appreciation and understanding for the underlying causes that have changed the natural and cultural landscapes, resulting in an increase of extremely severe, uncontrollable wildfire disasters.

During the past few years, it was particularly in the Mediterranean zone-biome, where wildfires were

experienced at levels never observed there before eg in Chile, Portugal in 2017, in South Africa in 2017 and 2018 and in Australia, Greece and the USA in 2018. However, we identified that these wildfires are also spreading beyond the Mediterranean and subtropical spheres, even in global zones where wildfires were never experienced before.

These wildfires confirmed the ineffectiveness of fuel management and fire prevention measures in many regions. If we are serious in our attempts to make these preventative attempts more effective, some drastic measures will be required to achieve this in the form of applying prescribed fire to construct regional buffer zones and reduce 'hotspots' of fuel accumulation to manageable levels. These fire-protective buffer zones should also be placed mainly by means of following continuous lines in the landscape and be wide enough to restrict wildfire spread effectively. Such measures should also meet fire-ecological requirements as far as is practically possible, considering all available options.

We have identified that the increase in wildfires is not restricted to the Mediterranean biomes, as is confirmed by the reports we have been receiving up to this advanced fire-related training event. Closer to home, as early as during 2017/2018, the increase in wildfires has already spread into the area east of the South African Mediterranean biome, from the winter and constant rainfall climatic area into the summer rainfall area, from the Tsitsikamma region of the Eastern Cape Province, ►

## Upcoming course

- ▶ as far as the Port Elizabeth region and beyond, into the inland region of the Eastern Cape.

This increase in wildfires clearly points to a need to include extrapolation of the methodology we will cover during the course, to other regions in South Africa and to other countries and continents outside this country. Subsequently, it was already reported that extreme increases in the occurrence and size of disastrous wildfires now also are a problem at Global levels. Climate change has been identified as a significant contributor to the spiral of increased wildfire events.

### Course objectives

Before discussing these objectives, it is necessary to confirm that we accept that we do not have to re-invent the wheel. Subsequently, we do not have to hold another discussion on the role of controlled fire, as this subject has been receiving attention in numerous international conferences, workshops and scientific publications that have seen the light over the past few decades. It is clear that we should rather concentrate on addressing the rapidly growing challenges and need for action. Some important publications to read in this connection are:

- White Paper on Use of Prescribed Fire in Land Management, Nature Conservation and Forestry in Temperate-Boreal Eurasia. Various authors; edited and published by JG Goldammer, GFMC, Freiburg, Germany, 2008.
- The work towards Integrated Fire Management – Outcomes of the European Project Fire Paradox: Silva, JS, Rego, F, Fernandes, P, Rigolot, E (editors), 2010.
- Vegetation Fires and Global Change – Challenges for concerted International Action. A White Paper directed to the United Nations and International Organisations (A GFMC Publication, edited by JG Goldammer), with various author contributions, 2013.

For further reading about the subjects attended to for the course we are recommending the following two book publications:

- Ecological Studies 84. Fire in the Tropical Biota: Ecosystem Processes and Global Challenges. Edited by JG Goldammer. A Springer-Verlag Publication, 1990. 497pp.
- Wildland Fire Management Handbook for Sub-Saharan Africa. Edited by Johan G Goldammer and Cornelis de Ronde. A publication of the Global Fire Monitoring Centre (GFMC), Freiburg, Germany, 432 pp.

During the training session, we will thus also cordially invite people from other global regions, to share their experiences with South Africans, as trainees and resource managers, to bring active life into international exchange. Subsequently the following will be addressed with this advanced training session:

- The unchecked fuel accumulation occurring and how serious these fuel loadings are. Subsequently, the assessment of such vegetation communities and fuel classification sets should be attended to and included in regional photo series, developed and tested with the assistance of region-specific custom fuel model sets, fire hazard rating processes and illustrated maps.

- Such preliminary assessments will then provide prioritised direction for further developing and fire-use processes.
- Developing, planning and structuring of the selected regional fire prevention procedures and protective buffer zones construction will now be the next objective.
- To arrive at, the optimum use, of prescribed burning programmes to combat fuel accumulation and wildfire threats, and to develop continuous fire-protective lines and maintain fuel-free strips, with fire-use application areas inside buffer zones constructed.
- Introducing trainees to advanced prescribed fire application in natural- and man-made-, even-aged-, commercial forests: An introduction in specific planning, burning application and result assessment.
- Development of optimum regional fire prevention plans and prescribed burning schedules.
- Incorporation of wildfire areas, weed control programmes and regional plan maintenance and incorporation of fire-resistance forests and scrub-forests within regional buffer zones.
- Extrapolation procedures of the above within Mediterranean- and other global- biomes, including the construction of fuel model sets and related programme developments thereof.
- Generally, to optimise the use of prescribed fire in fire dependant vegetation types, including in forests (including introduced exotic tree plantations), shrublands and grasslands.

### The study areas

A. The coastal area of the Western Cape Province, South Africa, which has now been classified as a "disaster region", situated in the local Mediterranean biome

In the first section of this document I have provided a summary of reasons why the Mediterranean Zone-biome was selected for priority focus for the advanced training programme: All of these Mediterranean biomes suffered from extremely intense, large and difficult-to-control wildfires as never experienced before.

The coastal area of the South-Western Cape Province region was hit by serious wildfires during 2017 and 2018 and even more wildfires were experienced during January 2019. It is in this region that we have to search urgently for answers. However, the key issue to be urgently discussed soonest will be why 'the wheels came off', although we already know this was as a result of a systematic change-over during the past four decades, from selected (but dedicated) controlled fire-use, to complete fire exclusion.

The fynbos shrubland is the main vegetation base here and these species-rich plant communities are fire dependant in order to maintain their species biodiversity. This was determined over decades of dedicated research in the region. Likewise, the role of fire in other (minor) vegetation communities in this region was also determined and we will discuss the reasons behind the wrong approaches to this fire-ecological misuse.

The main problem in the South Western and Southern Cape regions is that most vegetation communities are fire dependant and these fire-ecological requirements ▶

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## Upcoming course

- ▶ are simply not acknowledged. Therefore, the region is basically in a state of complete fire exclusion with out-of-control fuel accumulations.

Also to be addressed with this training programme will be the understanding of the basic solutions to overcome this serious fire exclusion problem in the Cape regions of South Africa, once the basic resistant to fire-use has been overcome by senior management level.

### B. The higher altitude (warm temperate) region of the Mpumalanga Province of South Africa, where the 2007 wildfires resulted in a complete turn-around of the approach to selected fire-use at integrated regional level

The so-called 'Middle Veld' of the Sabie-Graskop escarpment region, has a prominent natural montane grassland base, crossed by wetland grassland along depression lines and watersheds, fragments of indigenous forests and scrub-forests, mostly found in the depressions of the Escarpment. Most of these vegetation communities are of a fire-dependant nature. In the grasslands, at higher altitudes (mostly above m.a.s.l. of 1 400m), a yearly grassland biomass production of three to six tons/ha is the basic norm. Subsequently, grassland requires a one to three years fire rotation and fire has to be applied once the grassland base has been cured.

This region has been developed in an important commercial timber growing industrial area, planted mostly with exotic *Pinus* spp. These commercial tree plantations originated from fire-dependent origins, where fire exclusion was the norm for these tree stands. This was found to be giving rise to extreme fuel accumulations and subsequent high fire hazard.

To challenge this fire problem effectively, grassland and wetland fire burning programmes were effectively supplemented with burning 'under Pine tree canopies' and yearly about 1 500 to 2 000ha of these tree stands are now incorporated in region buffer zones on two-year rotations. The addition of such prescribed burning programmes, did lead to a significant reduction of wildfires in the region, from the disastrous 2007 when most of the region was burned over and tens- of thousands of industrial plantations and surrounding land were lost. From 2007 until today, only minor areas were burned over by wildfires.

For the purpose of this training programme, this region has been selected as a suitable example of how the challenge of increase wildfire can best be met.

#### General

The basic differences between the Cape Mediterranean biome and the Mpumalanga 'Escarpment' region can be summarised as follows:

Variable	SW and S Cape Region	Mpumalanga Escarpment Region
Rainfall Season	Winter to constant	Summer
Most prominent natural vegetation base	Fynbos shrubland	Montane Grassland
Fire need for maintenance of biodiversity?	Yes	Yes
Introduction of commercial, exotic trees?	Approximately 10% of use	Approximately 40% of land-use
Exotic tree growing spp?	Mainly <i>Pinus</i> spp.	<i>Pinus</i> and <i>Eucalyptus</i> spp.

It should also be noted that the natural vegetation of the region is today as far as possible burned according to fire-ecological requirements, around and within these commercial forest units, within strict nature conservation rules.

The Escarpment region of Mpumalanga has been identified as an area where optimum prescribed burning is applied today to meet the integrated regional fire prevention requirements, based on basic fire ecological principles as well as the need for regional fire protection. This is an ongoing process to maintain this important momentum and fire managers are still thriving for improvement.

A comprehensive course handbook will be available for the participants to the course, which will include some very important references for further reading, which will highlight the substantial publication base available.

#### Summary of the training programme to be covered

##### Assessing the local and international wildfire disaster status

- The South African and Global wildfire disasters recorded in the Mediterranean biomes during the past three years.
- Comparing the Western Cape and Mpumalanga regions.
- Trainees: Report back about the fire-status in their particular countries.

##### Basic principles of fuel- and related fire-dynamics

- Vegetation and fuel characteristics.
- Looking at fire-related dynamics.
- Construction and maintenance of regional fire prevention buffer zones
- Using fire hazard maps for top-down decision-making
- Making use of photo series, custom fuel model sets and related computer-based tools.

##### Specialised fire application matters

- Optimum use of prescribed fire: formulating burning treatments rotations, application responsibilities and training requirements.
- Incorporating specific land-uses and fuel management measures
- Calculating effectiveness and minimum buffer zone specifications, options and management.
- Presenting an introduction to the state-of-the-art of under-canopy burning application.
- Incorporation of land exposed to wildfires into future integrated regional fire prevention plans.

##### Creating an Integrated Fire Prevention (IFP) base, including mapping of recent wildfires within such a region

- Planning integrated fire prevention (IFP) and incorporating recent wildfire areas, over time.
- Creating a regional vegetation-, photo series- and fuel model base.

- Calculation and mapping a regional fire hazard classification with risk adjustments.
- Updating and maintenance of regional IFP plans.

### How to assess and structure regional fire and related weed protection systems

- This requires a 'top-down approach', particularly with the assistance of satellite images, remote sensing and regional classification of within-region exotic weed assessment and mapping.
- Once the above assessments have been completed to formulate an action plan to tackle the identified weed problems, also with selection controlled burning.
- To create and update yearly weed eradication action plans with the use of fire-use programmes, clearly prioritised and updated yearly.
- Integration of fuel management practises into Regional Integrated Programmes such as montane grassland burning for grazing purposes, fire application within agricultural lands, fire-use for forestry operations and related fuel reduction such as slash burning, also for nature conservation purposes such as rotational wetland burning.
- Integrating the above burned areas in fire prevention systems.

### Determining IFP priorities

- How to apply such processes, one has to use the IFP structures on the dangerous wind side first under 'no wind conditions' and then to main internal buffer zones, dangerous public roads etc. starting with the highest priorities.
- Working out separate priorities for different prescribed burning seasons, such as for under canopy burning (inside even-aged and natural tree stands), savanna, montane and wetland-grasslands.
- Identification and prescribed burning application of 'hot-spot' areas (identified earlier) first, to safeguard most dangerous areas before the dangerous fire seasons begins.
- After recent extremely intense, large and difficult to-control wildfires, to identify (a) the most dangerous remaining areas within and bordering such wildfire areas, and (b) provisionally determine most IFP programme priorities when ready for prescribed burning application.

### Creation of effective regional buffer zoning as well as how to apply prescribed fire according to regional priorities

- Regardless the above guidelines, prescribed burning must be applied to (a) create continuous protective buffer zones in the landscape effectively and systematically and (b) to ensure that the most dangerous wind directions are best treated with fire first covering the within-buffer zone areas.
- Ensure that every suitable burning day is utilised to the full, working along a prepared fire-use priority list.
- Where property owners are responsible for buffer zone creation and fuel management maintenance, the owner(s) involved should regularly check with other property owners to ensure priority buffer zones are 'operational' soonest.

- Ensure that the local authorities are also doing their part where they also have a regional task in this programme allocated. Where they are in control of buffer zones or part thereof, they must ensure that they lead by example.

### Follow-up specialist training requirements

While this fire management course has been planned for 16 to 20 September 2019, two more follow-up courses have been planned for 2019 and 2020, namely:

- A computer-based 'hands-on' course in the basic use of the 2-D BehavePlus fire behaviour prediction programme to develop and test custom fuel model sets for a number of purposes, including the provision for suitable management resources.
- A specialist regional fire management course to work towards an effective regional integrated fire prevention plan with effective maintenance programmes.
- Where required, to provide practical training in prescribed burning for instructors for a range of region-specific burning requirements in region-specific vegetation types (training the trainers).



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# Overstrand Fire and Rescue fleet bolstered



Overstrand Fire and Rescue Services, situated in the Overberg District Municipality in the Western Cape, South Africa, recently received three new vehicles. These vehicles will enhance the fire brigades' fleet, enabling them to reach destinations faster and they will be better equipped to deal with any type of incident. The official handover of the new Toyota Hino 6 000-litre water tanker, a Ford double cab 4x4 bakkie and a 4x4 Toyota Land Cruiser, as well as rescue tools and other specialised equipment to the value of R2 million took place on Wednesday, 1 August 2018. The purchases were made possible from funds received from the Western Cape Provincial Fire Services Capacity Grant.

The 6 000 litre water tanker is a welcome addition to the fleet of emergency response vehicles and is able to deal with some of the difficulties fire fighters experience with regards to water. Apart from supplying water during fire fighting operations, the tanker has the ability to pump water from open sources such as dams or swimming pools as an added bonus, as fire hydrants are not easily accessible in some areas.

The two bakkie units meet fire and rescue needs for incident command and operational response in rough terrain. They are fitted with two-way radios, which improve communication between the various divisions when working

in the field and enabling faster deployment when arriving at the scene of an incident.

Overstrand's executive mayor Dudley Coetzee said, "It fills me with great joy that I am able to be with you to share in this momentous occasion today. Knowing the challenges that we have faced in the Overstrand Fire Department, receiving keys for three new vehicles from the provincial government will certainly do much to enhance our service delivery in this area. I am especially thankful to Fire Chief Lester Smith for taking the initiative to approach the provincial government so that we could be considered in their project to help smaller municipalities such as ours with capacity building within the fire fraternity. I have no doubt that this appreciation is also felt by the various fire fighters who will be using these much needed additional resources and for whom the benefits will be profound."

Deputy Mayor Elnora Gillion said that Overstrand Fire and Rescue Services distinguished themselves as astute and capable professional fire fighters and that the team is doing a sterling job. She also mentioned that during the last year ie July 2017 to June 2018, fire and rescue responded to 619 incidents across the Overstrand.

Fire Chief Lester Smith thanked the Mayor for his support and his ability to recognise the value of a good fire fighting team. He also thanked Etienne du Toit, Western Cape Government deputy director: Fire Brigade Services and Colin Deiner, Western Cape Government chief director: Disaster Management and Fire/Rescue Services for listening to his plea and making it happen. He concluded by thanking Thelma Lobb of Fleet Management for her assistance as well as Angelo Aplon, assistant fire chief: Operations and Training, Marlu Rust, assistant chief: Fire and Disaster Management, Joe Schoeman, assistant chief: Fire Safety, Dawie Esau and the rest of his team. ▲

# Traffic jam leadership

By Wayne Bailey



Wayne Bailey

I was traveling down a crowded expressway this week with vehicles and large trucks everywhere. My thoughts were that traffic jams reflect our leadership or lack of. I began to compare how vehicles were being driven and how that compared to leadership.

The first comparison was people not turning on their turn signal. In life, sometimes we have people that go off and do their own thing, especially on the fire ground and not tell anyone. Freelancing on the fire ground is a no no. As you know, this can be dangerous to this person and the people around them.

Brake light is out. You wonder to yourself, is that a turn signal when they pump the brakes? As leaders, we need to have our bodies working in conjunction with our brain. Showing up to work with a hangover and some of your

senses not working could also get you and others hurt. Make sure all parts are working.

Pushing their way in front of you. This happened to me today. In my world, that's the actions of a bully. Someone that's driving and doesn't move over until the last minute due to road construction or a lane closure. They pass all the traffic in the right lane and move over the right lane when the road finally closes. Who is this person in your life? Someone that breaks the line and goes to the front? If this is you, stop! Your peers or who you may have influence over doesn't appreciate the rudeness, even if it makes you feel important.

Size doesn't matter. These big trucks, 18-wheelers I call them, can give a five second warning with a turn signal and you either get run over or get out of the way. These are Type A personalities. You may be one of them. You're saying, "Get on the train or be left." Be careful that you don't run over the people

that make you look good. When you walk through a room, lift people up, not tear them down.

Using finger sign language when you don't allow someone to cut in line. Some people are just rude. Can't say they were born that way. Somewhere in life they were either not taught respect or ignored their parents or family members that tried to instill politeness. These type people, I just ignore. They are not worth your time and effort to get mad or cause some serious road rage.

Battery dead or out of petrol on the side of the road. Some people just never know when to stop and recharge their battery or refuel. As leaders, it's important to take time off from work, reflect, step back and look at the big picture. If you're running hard with your head down, it's hard to see what's ahead. Take time to recharge your batteries. A strong battery will keep the new ideas flowing and allow you to see the big picture on that next call. 🔥



Traffic jams reflect our leadership or lack of

# The humble stretcher



Fig. XLVII. *By Maître du Couronnement de Charles VI. Source: Gallica Digital Library*  
22014. K

early 1900s, fuelled the greatest advances in casualty care and a consequential rapid evolution of stretcher design. Ammunition, soldiers and the wounded were all moved at the same time during World War I. Ammunition and soldiers both come before the wounded. Colt's stretcher for trenches was used to move a casualty from the initial location. The shape is designed to prevent attack from the sides and the spread of shrapnel from exploding bombs. But every corner is an obstacle around which you have to manoeuvre the rigid wooden stretcher. Survival of the injured depends on getting him to medical care as quickly as possible. A flexible stretcher like Colt will be easier to use. Trench corners will be easier to navigate and you and the other bearer will be able to move more freely and quickly. So you might find you have extra work on your hands, with time to go back to the battlefield and collect more casualties.

**A**n early stretcher, likely made of wicker over a frame, appears in a manuscript from circa 1380. Simple stretchers were common with militaries right through the middle of the 20th Century.

A stretcher, cot, litter or pram is an apparatus used for moving patients who require medical care. A basic type cot must be carried by two or more people. A wheeled stretcher known as a gurney, is often equipped with variable height frames, wheels, tracks or skids. The name gurney comes from a horse-drawn cab patented in the USA by J Gurney in 1883. Stretchers are primarily used in acute out-of-hospital care situations by emergency medical services, military and search and rescue personnel. In medical forensics, the right arm of a corpse is left hanging off the stretcher to let paramedics know it is not a wounded patient.

Warfare from the 1850s onwards, leading to the inevitable human casualties, coupled with a most significant increase in work-related accidents in the late 1800s and

The earliest stretchers used in ambulances were the Army cot-type canvas and wooden stretchers. As ambulances moved from horse drawn to motorised, wheeled stretchers began to evolve.



*Colt's stretcher for trenches, 1915-1918*  
Source: [sciencemuseum.org.uk](http://sciencemuseum.org.uk)

Early stretchers required a great deal of maintenance. Companies selling the stretchers either trained department personnel to do maintenance and repair on the stretchers or provided a contract service. Failure of stretcher components was so common that aggressive care was a must.

Over the last decade, there have been big changes in the stretchers available for use in ambulances. Carbon-based polymers have provided strength while reducing weight. Stability when moving over uneven surfaces has been enhanced by larger, specially-designed wheels. The mechanisms that allow you to raise and lower the stretcher or the head or foot of it have been redesigned for ease of use, stability and safety and durability.

Portable stretchers evolved from wood and heavy canvas to lightweight aluminium and canvas. They also stored easily, folding to fit into smaller compartments.

Basket stretchers have also improved over the years. Originally made of wire and steel, they evolved into lightweight, strong, easy-to-clean plastic.



Litter on wheels, made circa 1900

### Stokes stretcher

The Stokes stretcher, also known as the wire basket stretcher, is arguably one of the oldest medical devices in continuous use by the military. First exhibited at the St Louis World's Fair in 1904, it was conceived by the US Navy physician Charles Stokes (1863-1931) who in the Spanish-American War, witnessed first-hand the difficulties of transporting wounded through a Navy ship's gauntlet of gangways, ladders and hatches.

Unlike 'ambulance cots' and 'transferring boards' that were commonly used by the Navy at the end of the 19th Century, the Stokes was both stretcher and splint in one. It could immobilise the injured parts, allow for the carrying of a patient with minimum direct handling of extremities and according to its inventor, offer some "comfort and a sense of security."

In January 1906, by order of President Theodore Roosevelt, a joint board of Army and Navy medical officers convened to look at "improving the [military] medical departments." Along with the proposal for standardised diagnostic tags and the use of a Hospital Corps pouch (forerunner of the unit bag), the medical officers called for adoption of the Stokes Stretcher by the Army and Navy for use aboard hospital ships, transports and at seacoast artillery stations.

Charles Stokes would go on to serve as the first medical officer to command a Navy hospital ship (USS Relief) sailing it around the globe with Roosevelt's 'Great White Fleet' in 1908. In 1910, Stokes was appointed the Navy's 14th surgeon general, holding the office until 1914. He retired from the Navy as a rear admiral in 1917.



Battle of Pilckem Ridge 31 July to 2 August 1917: stretcher bearers struggle in mud up to their knees to carry a wounded man to safety near Boesinghe West Flanders, Belgium on 1 August 1917



*Unlike 'ambulance cots' and 'transferring boards' that were commonly used by the Navy at the end of the 19th Century, the Stokes was both stretcher and splint in one*

► **Gurney**

Generally spelled gurney but also guerney or girney. The first usage of the term for a wheeled stretcher is unclear but it is believed to have been derived from Pacific Coast slang. Its use in a hospital context was established by the 1930s. For ambulances, a collapsible wheeled stretcher or gurney, is a type of stretcher on a variable-height wheeled frame. Normally, an integral lug on the stretcher locks into a sprung latch within the ambulance in order to prevent movement during transport, often referred to as antlers due to their

shape. It is usually covered with a disposable sheet and cleaned after each patient in order to prevent the spread of infection. Its key value is to facilitate moving the patient and sheet onto a fixed bed or table on arrival at the emergency department. Both types may have straps to secure the patient.

The Nimier stretcher (brancard Nimier) was a type of stretcher used by the French army during World War I. The casualty was placed on their back but in a 'seated position', that is, the thighs were perpendicular to the abdomen. Thus, the stretcher

was shorter and could turn in the trenches. This type of stretcher is rarely seen today.

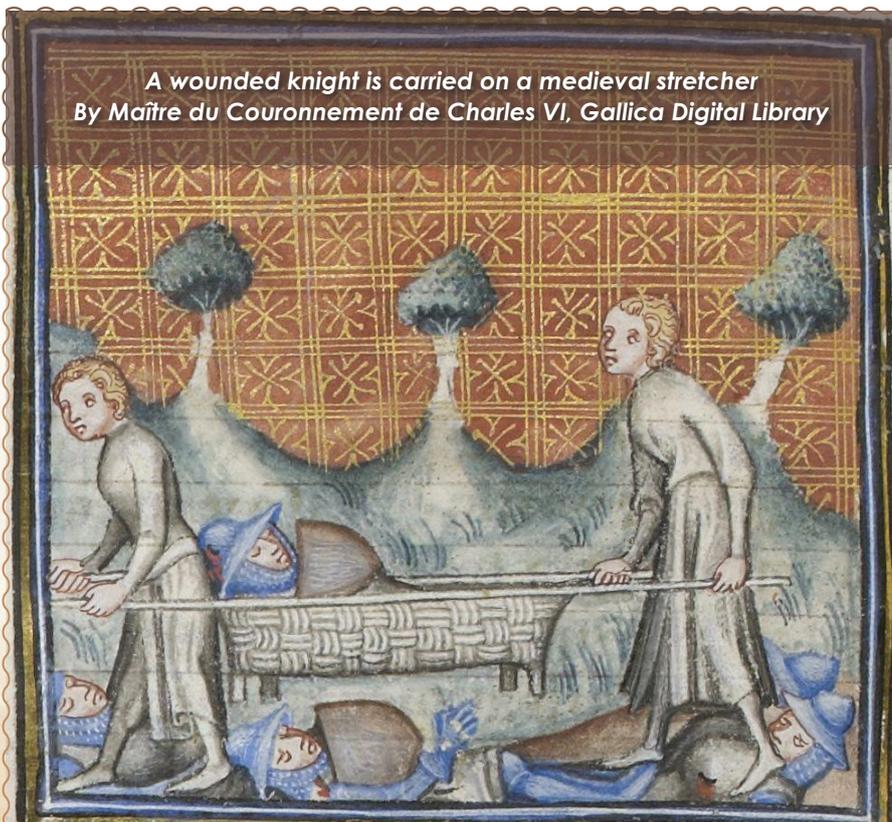
EMS stretchers used in ambulances have wheels that make transportation over pavement easier and have a lock inside the ambulance and straps to secure the patient during transport. An integral lug on the stretcher locks into a sprung latch within the ambulance in order to prevent movement during transport. Modern stretchers may also have battery-powered hydraulics to raise and collapse the legs automatically. This eases the workload on EMS personnel, who are statistically at high risk of back injury from repetitive raising and lowering of patients. Specialised bariatric stretchers are also available, which feature a wider frame and higher weight capacity for heavier patients. Stretchers are usually covered with a disposable sheet or wrapping and are cleaned after each use to prevent the spread of infection. Shelves, hooks and poles for medical equipment and intravenous medication are also frequently included.

**Basic stretchers**

Simple stretchers are the most rudimentary type. They are lightweight and portable, made of canvas or other synthetic material suspended between two poles or tubular aluminium frame. Many are stored as disaster supplies and are often former military equipment.

The folding stretcher, also known as a top deck or collapsible stretcher, is similar in design to the simple stretcher but features one or more hinged points of articulation to allow the stretcher to be collapsed into a more compact form for easier handling or storage. Some models may even allow the patient to sit upright in a Fowler's or Semi-Fowler's position.

The scoop stretcher is used for lifting patients, for instance from the ground onto an ambulance stretcher or onto a spinal board. The two ends of the stretcher can be detached from each other, splitting the stretcher into two longitudinal halves. To load a patient, one or both ends of the stretcher

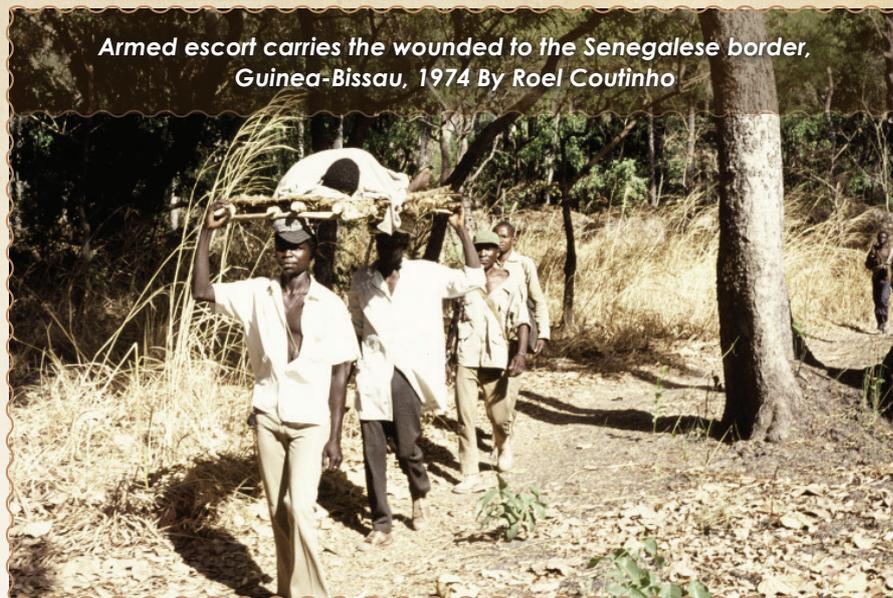


*A wounded knight is carried on a medieval stretcher  
By Maître du Couronnement de Charles VI, Gallica Digital Library*

are detached, the halves placed under the patient from either side and fastened back together. With obese patients, the possibility exists of accidentally pinching the patient's back when closing the stretcher, so care must be made not to injure them when carrying out this procedure.

The litter, also known as a rescue basket or Stokes basket, is designed to be used where there are obstacles to movement or other hazards; for example, in confined spaces, on slopes, in wooded terrain. Typically it is shaped to accommodate an adult in a face up position and it is used in search and rescue operations. The person is strapped into the basket, making safe evacuation possible. The litter has raised sides and often includes a removable head/torso cover for patient protection. After the person is secured in the litter, the litter may be wheeled, carried by hand, mounted on an all-terrain vehicle (ATV), towed behind skis, snowmobile or horse, lifted or lowered on high angle ropes or hoisted by helicopter.

A litter is a stretcher or basket designed to be used where there are obstacles to movement or other hazards; for example, in confined spaces, on slopes, in wooded terrain. Typically it is shaped to accommodate an adult in a face up position and it is used in



*Armed escort carries the wounded to the Senegalese border, Guinea-Bissau, 1974 By Roel Coufinho*

search and rescue operations. The person is strapped into the basket, making safe evacuation possible. The person generally is further protected by a cervical collar and sometimes a long spine board, so as to immobilise the person and prevent further injury. They are most notably remembered from Korea and Vietnam images of United States Air Force Pararescue airmen or more recent US Coast Guard video clips of helicopters rescuing injured people from isolated areas.

A Reeves Sleeve, SKED or 'flexible stretcher' is a flexible stretcher that is often supported longitudinally

by wooden or plastic planks. It is a kind of tarpaulin with handles. It is primarily used to move a patient through confined spaces, eg a narrow hallway or to lift obese patients. Reeves stretchers have six handholds, allowing multiple rescuers to assist extrication.

The WauK board is also designed for use in small spaces. The patient is secured to the board with straps. It has two wheels and a foldable footrest at one end, allowing the patient to be moved by one person, much as with a hand truck for moving cargo. It can also be used at a variety of angles, making it easier to traverse obstacles, such as tight stairwells.

Standard stretchers have several adjustments. The bed can be raised or lowered to facilitate patient transfer. The head of the stretcher can be raised so that the patient is in a sitting position (especially important for those in respiratory distress) or lowered flat in order to perform CPR or for patients with suspected spinal injury who must be transported on a spinal board. The feet can be raised to what is called the Trendelenburg position, indicated for patients in shock.

Some manufacturers have begun to offer hybrid devices that combine the functionality of a stretcher, a recliner chair and a treatment or procedural table into one device. ▲



*US Marines transport a non-ambulatory patient via litter, outside of Fallujah, Iraq in 2006*

# 2018

## September

**10 – 17 September 2018**

### The 13th World Firefighters Games Chungju, 2018

The World Firefighters games was established to promote international fire fighting information exchange in addition to fostering friendship between current or retired fire fighters (including soldiers) and their families through sports. Unlike elite sports events, fire fighters from all over the world can participate in the event, rather than competition. In order to create a festive atmosphere, the competition differs according to age and gender

**Venue:** Chungju, South Korea

For more information visit:  
[wfg2018.chungbuk.go.kr](http://wfg2018.chungbuk.go.kr)

**19 – 20 September 2018**

### The Emergency Services Show

The Emergency Services Show is the UK's leading annual showcase of the blue light sector, featuring over 450 exhibitors, live demonstrations, unique learning opportunities and unrivalled networking

**Venue:** Birmingham, UK

For more information visit: [www.emergencyuk.com/welcome](http://www.emergencyuk.com/welcome)

**19 – 23 September 2018**

### Africa Aerospace and Defence (AAD)

The Africa Aerospace and Defence (AAD) is Africa's only aerospace and defence expo that combines both a trade exhibition and an air show

**Venue:** City of Tshwane

For more information visit:  
[www.aadexpo.co.za](http://www.aadexpo.co.za)

**25 – 27 September 2018**

### Medic East Africa

The show aims to provide an exclusive platform for the healthcare and medical laboratory market and will bring together more than 4 000 of the region's most influential decision makers

**Venue:** Visa Oshwal Centre Westlands, Nairobi, Kenya

For more information visit:  
[www.medicestafrica.com/en/](http://www.medicestafrica.com/en/)

**27 – 28 September 2018**

### ICFSST 2018 : 20th International Conference on Fire Safety Science and Technology

The conference aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of fire safety science and technology. It also provides the premier interdisciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered and the solutions adopted in the field of fire safety science and technology

**Venue:** Holiday Inn London, Wembley, UK

For more information visit:  
[www.waset.org/conference/2018/09/london/ICFSST/home](http://www.waset.org/conference/2018/09/london/ICFSST/home)

**19-20 September 2018**

### Disaster Management Institute of Southern Africa (DMISA) Annual Conference

Disaster Management Institute of Southern Africa's (DMISA) 34th annual conference. This year's theme is Mobilising Future Ready Resilience. DRR 2018 will focus on reducing direct disaster economic losses, aligning with the UNISDR Sendai 7 Campaign's 2018 Target 3 priority

**Venue:** Kopanong Hotel and Conference Centre, Benoni, Ekurhuleni

**Contact:** Karin Muller,  
Tel: 011 822 1634  
Email: [Karin@disaster.co.za](mailto:Karin@disaster.co.za)

## October

**3 – 5 October 2018**

### Veldfire Management Symposium

The underlying theme for this year's symposium is: "From commitments to action: Ecosystems based fire management for effective disaster /risk reduction"

**Venue:** Nelson Mandela University George Campus

**Contact:** Tiaan Pool  
Email: [Tiaan.Pool@mandela.ac.za](mailto:Tiaan.Pool@mandela.ac.za)

**11 – 13 October 2018**

### Florian 2018

Trade fair for fire brigades, civil protection and disaster control. Integrating the rescue service forum aescutec into Florian stands for an holistic approach to regard all rescue forces in this unique fair

**Venue:** Dresden, Germany

For more information visit:  
[www.messe-florian.de/en/](http://www.messe-florian.de/en/)

**17 – 19 October 2018**

### 4th Biennial Conference of the Southern Africa Society for Disaster Reduction

The conference theme is stop disaster risk creation in SADC, covering various subthemes as Urban risk and development, Climate smart agriculture, Socio-ecological resilience and Hazard and risk governance among others

**Venue:** Coastlands Umhlanga Hotel, KwaZulu-Natal

For more information visit: <http://sasdir.org>

**21 – 27 October 2018**

### World Rescue Challenge 2018

The bid to host the 2018 World Rescue Challenge has been won by WRO member Organisation, the South African Medical Rescue Organisation (SAMRO), South Africa. Details of the event will be made available on the website when they become available, however those interested in attending should note that the proposed may be subject to change at this early stage

**Venue:** Cape Town

For more information visit:  
[www.wrescue.org](http://www.wrescue.org)

## November

**26 – 30 November 2018**

### Wildfire Ready Convention

Official opening of the Western Cape's

wildfire season, hosted by Western Cape Umbrella Fire Protection Association

**Venue:** Lourensford Wine Estate, Somerset West

**Contact:** Email: [sue@wcfupa.co.za](mailto:sue@wcfupa.co.za)

# 2019

## January

**28 - 31 January 2019**

### Arab Health 2019

For 44 years Arab Health has brought the latest innovations in healthcare. From state-of-the-art imaging equipment to the most cost-effective disposables; developments in surgery to advances in prosthetics, Arab Health continues to be at the heart of healthcare in the Middle East

**Venue:** Dubai World Trade Centre, UAE

For more information visit:  
[www.arabhealthonline.com](http://www.arabhealthonline.com)

## March

**26 - 28 March 2019**

### Wildland-Urban Interface Conference 2019

2018 wildland-urban interface fires have demonstrated unrelenting intensity and alarming rise in both significance and prevalence. Join us and other leaders to collaborate on emerging issues and discover innovative opportunities within wildland fire management

**Venue:** Reno, Nevada, US

For more information visit: [www.iafc.org](http://www.iafc.org)

## April

**8 - 13 April 2019**

### FDIC International Conference 2019

FDIC International offers 34 000 fire and rescue professionals from 65+ countries around the world, quality world-class instructors, classrooms, workshops, HOT evolutions and the most innovative products and services available to the industry displayed by over 800 exhibiting companies

**Venue:** Indianapolis, Indiana, US

For more information visit: [www.fdic.com](http://www.fdic.com)

## May

**4 May 2019**

### International Fire Fighters Day 2019

International Fire Fighters' Day is observed each year on 4 May. On this date you are invited to remember the past fire fighters who have died while serving our community or dedicated their lives to protecting the safety of us all. At the same time, we can show our support and appreciation to fire fighter's worldwide who continue to protect us so well throughout the year.

## *The beast*

Deep in the shadows  
Alone in the cold  
The nightmare begins  
The horror unfolds

Born out of darkness  
By the master of death  
It crawls through night  
Devours with its breath

It feeds on ignorance  
And lives off of fear  
It slows down for none  
And stops for no tears

It feels not for the poor  
Cares not for the old  
It loves not the children  
And fears not the bold

It backs down for none  
And fights all who dare  
To test out its might  
And enter its lair

If not for those few,  
Who fear not the Beast  
It would conquer the world  
With all as its feast

They face the dragons  
That ravish the lands  
Armed not with swords  
But courage and hands

They are the heroes  
That arrive in the night  
Upon their chariots  
Covered with light

They rescue the prisoners  
Held in the grasp  
Of the ruler of hell  
The devil in mask

When the dragon is dead  
And all is well again  
They remount their chariots  
Simply as men

They ride off in the night  
As swift as they came  
To battle another  
Beast of the flame

**Author: Anonymous**

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