

# Integrating fire management in the southern Cape



By Theo Stehle

Recent disastrous wildfires in the Cape Peninsula, exacerbated by climate change, have highlighted the need for effective, coordinated, integrated fire management. The southern Cape has had its share of serious wildfires during the past two decades, which has prompted the quest for how best to apply the fire laws with regard to effectively not only preventing and fighting veld and forest fires, but integrating this with the management of the veld by fire.



SCFPA management team, back row L-R: Len du Plessis, Paul Gerber, Danie Grabe, Elske le Roux, Dirk Smit and Philip Wilken. Front L-R: Deon van Wyk (Eden DM), Jan Wolmarans (Eden DM), Charl Wade and Japie Hendrik.

The southern Cape has been successful in developing effective coordinated strategies and practices to achieve the aims of the fire laws, by developing fire protection associations according to the principles of economy of scale and the cost-effective pooling of resources, which could serve as a model for others to follow.

FPA's operate in a highly complex environment. On the local level there is a fragmented landscape of laws and institutions concerned with prevention and fighting of wildfires, and with using fire as a tool for managing natural vegetation. In terms of laws there is the Fire Brigade Services Act (FBSA), the Disaster Management Act (DMA) and National Veld and Forest Fires Act (NVFFA). In terms of institutions, the fire brigade services and disaster management departments of the municipalities and district municipalities; the Working on Fire and Working for Water programmes under the National Expanded Public Works Programmes; various national and provincial government and semi-government departments; public entities managing large tracts of state owned land; big and small private forestry and farming land holdings; and finally the fire protection associations (FPA's) constituted under the NVFFA.

Then factor in elements like fire risk, urban-wildland interfaces, population density and distribution patterns, infrastructure development, availability of resources, big, highly organised landowners alongside small, individual landowners with minimal resources, and last but not least, human nature and personalities.

Cooperation and coordination between all the



role players is a massive challenge.

The southern Cape has a unique spectrum of risks posed by large tracts of fynbos mountain veld, extensive forestry assets, and intensively developed urban and rural landscapes. It also has a well developed infrastructure and local economy, which combined with all the other factors present creates an ideal opportunity to serve as a model for integrated fire management for the rest of the country.

The southern Cape contains portions of the fynbos biome, known as the Cape Floral Kingdom. The United Nations Development Programme (UNDP) is running bioregional conservation programmes like the CAPE programme in the fynbos biome. Risks posed by climate change lie at the root of this. UNDP has been

supporting the SA Government to build capacity in ecosystem management as well as in disaster risk management. It runs a project aimed at reducing risks from wildland fire hazards associated with climate change in the Western Cape fynbos biome. The southern Cape, from a fire management perspective, is benefiting considerably from this project.

## Integrated fire management

The concept of integrated fire management (IFM) is now widely accepted as the basis for effective management of the risks of wildfires to property and lives and for maintaining the natural ecology. This concept has been adopted by the Southern Cape Fire Protection Association (SCFPA).

After the promulgation of the NVFFA it took a few years for stakeholders to get to grips with its implications and to gain practical experience in its application, especially with regard to FPA's, which the Act intended to be the vehicle for implementation of its aims and objectives. The car literally had to be built while being driven.

In 1999 the southern Cape was identified as one of six pilot areas in the country for establishing FPA's. The initial decision was to establish a Southern Cape FPA between Mossel Bay and Plettenberg Bay but very little happened until 2005. In the meantime about nine small FPA's were established in the Eden District Municipality and one, the Tsitsikamma FPA, in the Cacadu DM in the Eastern Cape Province.



Working on Fire firefighters assist the Southern Cape FPA with fire prevention and firefighting duties.

In 2007 Paul Gerber of the Department of Agriculture, Forestry and Fisheries (DAFF) took up the post of fire advisor in the Knysna Forestry Office after having been transferred there from the Boland area where he gained experience in facilitating the establishment of the Greater Cederberg FPA along the Cape West Coast. Paul played a leading role in the amalgamation of the 10 FPAs in the southern Cape and Tsitsikamma, as small FPAs had proved not to be viable and cost-effective. This resulted in the establishment of the greater Southern Cape FPA (SCFPA) in 2009, spanning the Eden DM, encroaching slightly into the Central Karoo DM, and straddling the provincial boundary to incorporate the Tsitsikamma area, part of the Langkloof and the Baviaanskloof in the Eastern Cape. Economies of scale and lower overheads made all the difference. Where there was 10 of everything, now there was only one: fire protection officer, bank account, FPA manager and secretary.

The Deputy Chief Fire Officer and Head of Disaster Management in the Eden DM, Gerhard Otto, also serves as Fire Protection Officer of the SCFPA, thus further consolidating and integrating the management of fire protection efforts.

In 2009 the FPA established headquarters in

Knysna and a full-time base manager and administrative person were appointed. In 2010 a satellite office and base was established in Riversdal, and in 2012, an operational support officer and two extension officers were appointed with funding from GEF.

From small beginnings the SCFPA has developed into a formidable, financially viable organisation, with arguably the biggest membership in the country. The number of members (landowners) grew from 137 in 2008 to 1 146 in 2012. Following the appointment of two extension officers membership increased rapidly to 3 908 in March 2015.

### Fire management units

The SCFPA covers an area of about 4,6 million ha, about half of which is under ownership of members. (It should be noted that most of the land not owned by members is located in areas of low fire risk). The area has been subdivided into fire management units or FMUs, which are made up of groups of rural landowners that naturally belong together, for example farmers' associations and conservancies. There are currently 71 of these and they are still growing. Fire management and smoke report plans are drawn up individually for such units.

An executive committee or EXCO, comprising

representatives from FMUs, DAFF, the Eden DM, and the larger organisations like Cape Pine, PG Bison, Geo Parkes, CapeNature, SANParks and WoF, oversee the FPA with regard to policy and strategy, and approve its budget. A SANParks representative acts as standing chairperson. Paul Gerber, who represents DAFF on the EXCO as fire adviser, acts as its de facto chief executive officer cum managing director, as the FPA is formally constituted as a BBBEE compliant registered non-profit company, as well as a public benefit organisation.

The Knysna office is the nerve-centre of the SCFPA organisation, and is staffed by the area manager east (Dirk Smit), the operational support officer (Elske le Roux) and one extension officer (Danie Gräbe). The area manager west (Charl Wade) and extension officer (Philip Wilken) are based in the satellite office in Riversdal.

A senior base manager and several base managers, stationed at strategically located bases in the FPA area, supervise trained teams of fire fighters and report to the area managers.

Smaller wildfires are handled by FMUs as far as possible, but larger wildfires require a cooperative, coordinated approach involving all the role players: the FPA, the Fire Brigade Services, Disaster

Management and WoF. This is imperative for the successful control of wildfires. These events are managed using the ICS (Incident Command System) as prescribed by the South African ICS work group.

WoF teams are in partnership with the FPA in terms of formal agreements. The management of the FPA is remunerated from membership fees and contributions from WoF, which provides funding for about one third of the managers. Furthermore, WoF has eight standard teams and two helitac teams operating with the FPA, and another six standard teams operating with other partners like CapeNature and SANParks in the FPA domain. Their function is primarily fire prevention, but fighting wildfires takes priority when emergency situations arise.

The three technical posts sponsored by GEF up until the end of 2015 will in future have to be covered by the FPA's own budget, which shouldn't be a problem considering the growing membership base.

The SCFPA boasts an impressive pooled arsenal of fire fighting equipment, including six trucks and trailers, three bakkiesakkies, eight private Idv's available for official use, and small equipment like water spray cans, chainsaws, brushcutters; and communication equipment.

WoF provides a fire engine during summer, while



Risk assessment map of the southern Cape.

Eden DM provides a heavy truck to transport the teams.

Aerial fire fighting resources include three WoF spotter planes, one fixed wing bomber (W Cape Provincial Government), three helicopters during summer funded by Disaster Management, and one on contract during winter, funded by the FPA.

The hub where everything comes together is the high tech operations room in the FPA office, manned by operations support officer Elske le Roux. Her responsibilities include communications, fire awareness programmes, database management, GIS and mapping and communication of FDI and weather info.

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Weather station providing crucial data to the southern Cape FPA's ops room.

**'There has been a dramatic improvement in suppressing and extinguishing wildfires during the past couple of years'.**

BRAAM DU PREEZ, CAPE PINE

Paul Gerber highlighted some of the SCFPA's achievements:-

- the sponsoring of fire fighting assistance to landowners by the Eden DM free of charge for the first hour and a 50% discount for assistance with controlled fires;
- training of aviation radio operators;
- securing a bursary for the Saasveld Fire Management Course;
- branding of the FPA's vehicles; and
- risk mapping on a macro (SCFPA) as well as micro (FMU) scale using GIS tools and database.

The funds generated through the exponential increase in membership made it possible for the SCFPA to increase prescribed burning operations and to take integrated fire management to a higher level.

Training is a high priority for the SCFPA, which has trained over 500 people during the past two years. There is basic fire fighting training for the lower levels, and training sponsored by FynbosFire covering topics like veldfire behaviour, risk analysis, fire ecology and fire simulation for the higher levels.

Last but not least, excellent teamwork between Paul and his management and technical team, and the building of bridges between the role players in fire management – especially with the Eden DM – has resulted in effective wildfire fighting operations in the area, minimising losses to property and lives.

"There has been a dramatic improvement in suppressing and extinguishing wildfires during the past couple of years," commented Cape Pine's Braam du Preez.

Braam attributes the success of the SCFPA to the ability of the role players to work together for the same goal. He is of opinion that personalities play a cardinal role in achieving this.

"One of the keys to success in the southern Cape is that egos do not play such a prominent role as is the case with some other FPAs. In the southern Cape there is a will to make a difference and to deliver service. Gerhard Otto, chief of disaster management in the Eden DM has made a major contribution in this regard." **S&F**



Fire control in Fynbos poses unique management challenges as it is both vulnerable to fire, and depends on fire for survival.



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