## A GUIDE TO INTEGRATED FIRE MANAGEMENT

**COMPLETE** 

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## THE INTEGRATED FIRE MANAGEMENT HANDBOOK

## ESTABLISHING FIRE PROTECTION ASSOCIATIONS IN SOUTH AFRICA

"Fire is a bad master but a good servant"



This handbook draws on material developed by a number of individuals and institutions including Working on Fire, the Western Cape Provincial Disaster Management Fire Working Group, the Department of Agriculture, Forestry and Fisheries, Council for Scientific and Industrial Research (CSIR), various individual FPAs and FPA managers, Kishugu, and the FynbosFire Project.

Many thanks for all the contributions.

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#### **TABLE OF CONTENTS**

ACK	nowleage	ements		/
Fore	eword by	the UND	P	8
Fore	eword by	Kishugu I	Non-Profit Company	9
Intr	oduction			10
Gui	de to the	Handboo	k	11
1	Integr	ated Fire	Management	15
	1.1		Integrated Fire Management?	
	1.2		e the components of Integrated Fire Management?	
	1.3		the Wildland-Urban Interface?	
	1.4	What are	e the different types of fires and burns?	18
2	Legal	framewo	rk	23
	2.1	General	overview	23
	2.2	Local Go	overnment Municipal Structures Act (Act No. 117 of 1998)	23
	2.3	Disaster	Management Act (Act No. 57 of 2002)	24
	2.4	Fire Brig	gade Services Act (Act No. 99 of 1987)	25
	2.5	National	Veld and Forest Fire Act (Act No. 101 of 1998)	25
	2.6	National	Environmental Management Act (NEMA) (Act No. 107 of 1998)	26
	2.7	Municipa	al by-laws	26
	2.8	Comme	nt	26
3	Lando	wners an	nd fire	29
	3.1	Why sho	ould landowners look to manage wildfire?	29
	3.2		e the legal duties of landowners in respect of wildfire prevention led in the NVFFA?	29
	3.3	What is	the presumption of negligence in relation to wildfires?	29
	3.4	FAQ: Wh	ny should landowners join an FPA?	30
4	Fire P	rotection	Associations (FPA)	33
	4.1	What is	an FPA?	33
	4.2	What is	the role and what are the duties of an FPA?	33
	4.3	FAQ: Is t	the FPA a fire fighting force?	33
	4.4		s a right and who is obliged to be a member of an FPA?	
	4.5		a point of interface: who are the typical stakeholders in an FPA?	35
	4.6	Wildland	le do Fire Protection Associations (FPAs) play in the I-Urban Interface?	35
	4.7		Communities in the Wildland-Urban Interface Protection Associations	36
	4.8	Who car	n register as an FPA?	37
	4.9	What is	the ideal geographic scale for an FPA?	37
	4.10	FPA bou	ndaries	38
	4.11	How sho	ould an FPA be structured internally?	39
	4.12	What ma	akes for a successful FPA?	39
	4.13	How are	FPA members organised?	40
		4.13.1	Fire Management Units	
		4.13.2 4.13.3	What main role players does the law expressly provide for?	

	4.14	Membe	rship administration	
		4.14.1	Membership recruitment	49
		4.14.2	Membership application forms	
		4.14.3	Membership fees	49
5	What	is the leg	gal process for setting up and registering an FPA?	53
	5.1	What do	oes the Department require in the initial phase of setting up an FPA?	53
	5.2	What do	oes the Department require in the second phase of setting up an FPA?	54
6	What	is the le	gal process for deregistering an FPA?	61
	6.1		tration at the instigation of members	
	6.2	_	tration at the instigation of the Department	
	6.3		s following on the decision of the Minister to deregister an FPA	
7	Resou	ircing an	FPA	65
•	7.1	_	nagement models	
	7.2		al reporting requirements of the Department	
	7.3		25	
	7.4		7	
8	FDA m	_	file	
Ü		-	areness	
	8.1 8.2		areness	
	8.3		ncy alerts and warnings	
		J	,	
9			3	
	9.1		on	
	9.2		d functions of the UFPA	
	9.3		nation and oversight	
	9.4		ship management	
	9.5		dge management	
	9.6		re of the UFPA	
	9.7	Funding	the UFPA	/8
10	Practi	ising Inte	grated Fire Management	81
	10.1	The cor	ntinual process of IFM	81
	10.2	Integrat	ted Fire Management Plan	81
	10.3	_	ted Fire Management business unit plan	
	10.4	Provinc	ial wildfire plans	85
11	Stake	holder m	obilisation	89
	11.1	Integrat	ted Fire Management awareness	89
	11.2		mobilise stakeholders	
	11.3	Sustain	ing stakeholder engagement	90
12	The Fi	ireWise (	Communities programme	93
	12.1		ing the need for a FireWise Community	
	12.2	-	inity involvement	
	12.3		s of a FireWise Community	
	12.4		older communication	
13	Riek <i>I</i>		ent	
	13.1		r, climate change, and fire trends	
	13.1		pes, veld age, and fuel types	
	13.3		map fire hazards	
			···	

	13.4	Fire hist	ory and burn scars	. 103
	13.5	Urban e	dge activities	. 104
14	Preve	ntion, pro	otection, and planning	. 109
	14.1	, -	enting Wildland Fire Awareness Programmes	
	14.2	-	Community Risk Reduction?	
	14.3		is on prevention	
	14.4		n integrated approach to fire prevention	
	14.5	_	vention campaigns	
	14.6	-	tems Approach (Ecological model)	
	14.7	-	ual planning	
	17.7	14.7.1		
15	Firehr		The difficulty planter for the Tylese Blene	
10	15.1			
			lowners legally obliged to create firebreaks?	
	15.2		the purpose of a firebreak?	
	15.3		hould firebreaks be located?	
	15.4		the procedure for optimal firebreak planning?	
	15.5		the approximate costing of a firebreak?	
	15.6		ermines how broad a firebreak should be?	
	15.7		es "maintaining a firebreak" mean?	
	15.8		ppens if a landowner fails to create appropriate firebreaks?	
	15.9	-	required to cut firebreaks through indigenous vegetation?	
	15.10		d management	
			Legislation that compels landowners to reduce fuel loads	
			How are fuel loads reduced?	
	15.11		the procedure for optimal planning of fuel load reduction?	
	15.12		ed burning	
			Relevant legislation	
			CARA burning permit	
			Local authority by-laws	
			What is the procedure for obtaining a burning permit?	
	15.13		responsible for managing a prescribed burn?	
	15.14		n matrix for deciding whether to undertake a prescribed burning	
	15.15		ger rating and early warning systems	
			What is the Fire Danger Rating?	
			National veldfire risk map	
			How is the Fire Danger Rating determined?	
			How is the Fire Danger Index normally communicated?	
14	Datas		rdination, and suppression	
16			ection	
	16.1			
		16.1.1 16.1.2	Manual detection systems	
	16.2		dent Command System	
	16.3	Commu	nication and dispatch	141
	16.4	Fire sup	pression	. 141
		16.4.1	Do all landowners require fire fighting equipment?	142
		16.4.2	Initial attack	
		16.4.3	Do landowners have to pay for fire fighting on their land?	
		16.4.4	Extended fire suppression	
	16.5	,		
	16.6	Managir	ng multiple incidents	145

17	Rehal	bilitation		149
18	Mana	gement:	Coordination, record-keeping, and monitoring and evaluation	153
	18.1	Coordin	nation	153
	18.2	Record-	-keeping	153
		18.2.1	Membership database	. 153
		18.2.2	Compliance	. 154
		18.2.3	Training Providers	. 154
		18.2.4	Education	. 154
		18.2.5	FPA administration systems	
		18.2.6	Financial administration	
	18.3	Reports	S	. 155
		18.3.1	National Fire Reports	
		18.3.2	To whom must an FPA report annually?	
		18.3.3	What is the format of the annual FPA report to DAFF?	. 156
	18.4	Assess	ments	. 156
		18.4.1	What is the purpose of an assessment?	. 156
		18.4.2	How should landowner-compliance be assessed?	
		18.4.3	Is the FPA functional?	. 158
19	Марр	ing and (	GIS systems	163
20	Traini	ng: Build	ling IFM capacity	169
21	Incen	tives and	l Enforcement	173
	21.1	Incenti	ves	. 173
		21.1.1	Incentives offered by FPAs	. 173
		21.1.2	Rates rebate	
		21.1.3	Fire fighting cost rebates	
		21.1.4	Insurance rebates	. 173
	21.2	Enforce	ement	. 174
		21.2.1	What is the role of the FPA in enforcement?	. 174
		21.2.2	What are the offences created by the National Veld and Forest Fire Act?	. 174
		21.2.3	What are the penalties for contravention of the National Veld and	
			Forest Fire Act?	. 175
		21.2.4	Who has the power to enforce the National Veld and Forest Fire Act?	. 175
		21.2.5	What are the legal powers of the FPO?	
		21.2.6	What is the procedure for dealing with non-compliance?	
		21.2.7	What other sanctions does an FPA have at its disposal?	. 176
22	Class			170

Addendum: List of Tools

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- South African Department of Environmental Affairs
- South African Department of Agriculture, Forestry and Fisheries
- South African Department of Cooperative Governance and Traditional Affairs
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- Western Cape Department of Agriculture
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- Eastern Cape Department of Local Government and Traditional Affairs
- National Disaster Management Centre, Western Cape Provincial Disaster Management Centre and fire fighting and disaster management services in District and Metropolitan Municipalities across the Fynbos Biome
- Expanded Public Works Programme's Working on Fire and Working for Water
- Registered Umbrella Fire Protection Associations and Fire Protection Associations within the Fynbos Biome
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- National Committee on Climate Change
- · South African National Biodiversity Institute
- South African National Defence Force
- South African National Parks
- South African Weather Service
- USA National Fire Protection Association
- Kishugu
- Flower Valley Trust
- MTO Forestry

#### FOREWORD BY THE UNDP

The United Nations Development Programme (UNDP) is proud to be part of this comprehensive and practical Integrated Fire Management handbook. The handbook is one of several outputs achieved under the Global Environment Facility (GEF)'s Special Climate Change Funded FynbosFire Project, led by the Department of Environment Affairs, through UNDP.

The project's main objective is to develop and implement integrated disaster risk management strategies to address climate change-induced fire hazards and risks in the Fynbos Biome of South Africa.

The project contributes towards the United Nation's recently adopted Sendai Framework for Disaster Risk Reduction (2015-2030) as well as the UNDP's Global Commitment to Risk-Informed Development "5-10-50" - a 10 year global programme in support of country efforts to reduce the risk of disasters. The ultimate goal of this Framework is the substantial reduction of disaster risk and losses in lives, livelihoods and health, and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries. These key frameworks as well is the project implemented by UNDP recognise the significance of building national and local level capacities to manage disaster risks; and building capacity at local level to manage increased incidences of natural disasters including fires. This handbook, therefore, directly responds to this objective and can be expected to greatly contribute to improved fire management approaches.

UNDP is confident that the handbook will go a long way towards strengthening the capacity of people and institutions in the Biome, to implement effective and proactive integrated fire management systems for the reduction of hazardous fires. As primary users, Fire Protection Associations in the Western Cape have already piloted the Handbook and have confirmed its usefulness and practicality.

In closing, let me reiterate UNDP's key message going into Sendai, which gained much traction at the Conference 'if it isn't risk-informed, it isn't sustainable development'.

On behalf of the UNDP and GEF, I want to thank the various partners who have been involved in the development of the handbook and hope it will contribute to better Integrated Fire Management in South Africa.

#### **Gana Fofang**

**UNDP Resident Representative** 

#### FOREWORD BY KISHUGU NON-PROFIT COMPANY

The global fire fighting community comprises a special group of people committed to protecting lives, livelihoods, property, and the environment - every day.

The South African wildland fire fighting fraternity is a highly regarded member of that global community and this Handbook is a result of their endeavours. It is the culmination of countless workshops and discussions involving multiple stakeholders who stayed the course from the concept stage of the Global Environment Facility's FynbosFire Project in 2006.

They have volunteered their knowledge and experience, while simultaneously establishing and operating Fire Protection Associations (FPAs) in the Fynbos Biome, as well as in other areas of the country. This Handbook distils the tough lessons learnt along the way in a user-friendly and practical manner.

We realised that the material gathered during this project was useful far beyond its intended mandate, and has global applications not just in the Fynbos Biome, but also as a contribution to the global body of wildland fire fighting knowledge.

All material, generic forms and annexures are available online.

The Handbook is grounded in the legal framework of the *South African National Veld and Forest Fire Act 101 of 1998* and explains all the steps from founding a Fire Protection Association to making it a sustainable institution. In so doing, it shifts the focus towards the proactive practice of Integrated Fire Management and away from reactively suppressing wildfires.

Current climate change modelling predicts that ecosystems such as the Fynbos Biome will be subjected to increasing fire danger weather. Yet, fynbos, like many other ecosystems, is "born-to-burn" - it must have periodic fire in order to rejuvenate. Couple this with economic development and an expanding Wildland-Urban Interface with the corresponding influx of people and you have a recipe for disaster.

The likelihood of multiple ignitions and overstretched fire fighting services is very real. Working smart and working together is key to adapting to these changing conditions - and that is what Integrated Fire Management is about.

In the future, simply having a plan for wildland fire suppression is no longer an option. Fire management personnel will be required to be adept at co-ordinating and pooling FPA members' efforts, planning to reduce fire risk at a landscape level, creating public awareness, managing fuels, and balancing the beneficial use of fire in the environment while protecting life and property. It is no small task!

We hope that this Handbook will fulfil a role in capacitating fire managers, extension personnel, and students in the years ahead.

#### Val Charlton

Managing Director - Kishugu Non-Profit Company

#### INTRODUCTION

Over the past decade land use changes in many regions of the world has led to an increase in the frequency and severity of wildland fires. In some countries there is also a trend towards an excessive application of fire in land use management.

Wildland fires have a range of social, economic, and environmental impacts—positive and negative—that are well researched. The practice of Integrated Fire Management arose from a need to ensure that wildland fires are able to serve a greater good than the harm they cause.

Integrated Fire Management addresses the problems and issues posed by damaging and beneficial wild-land fires within the context of the natural environment and the socio-economic systems in which they occur. It evaluates and balances the relative risks posed by wildland fire with the beneficial or necessary ecological and economic roles that fire may play in a given area, landscape, or region. As a result, Integrated Fire Management integrates the following:

- the entire fire cycle and its different components of prevention, protection, suppression, and rehabilitation:
- the fire management efforts of all land managers whether in respect of public or private land;
- · the actions of regulatory agencies with the management measures on the ground; and
- the funding and resource allocation to optimise its benefits and impacts.

An integrated approach seeks to secure the maximum benefit from the available resources and to help communities find cost-effective approaches to maintain desirable wildland fire programmes while limiting fire damage.

When wildland fires do occur, Integrated Fire Management provides a framework for:

- · weighing the relative benefits and risks of different wildfire scenarios;
- evaluating whether the effects of a wildfire will be detrimental, beneficial, or benign; and
- responding appropriately, based on stated objectives.

#### FACT or FICTION? Fire is always bad

Fiction. Fire is part of the life cycle of natural ecosystems such as the Fynbos Biome.

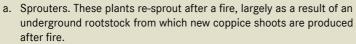
The frequency and seasonality of fire determines which species occurring within the ecosystem persist and which perish. Fires at too short or too long intervals will lead to a loss of plant species, plant diversity, and a reduction in biodiversity. This makes the practice of Integrated Fire Management important.

#### **Fynbos and Fires**

FACT

FICTION

Fynbos and Renosterveld plants have adapted to survive wildland fires. Broadly, in relation to fire, plants can be categorised as:





- b. Non-sprouters or re-seeders. Fire kills these plants, but their seeds are protected against fire. Often, prior to dying, they produce copious amounts of seeds that germinate in post-burn conditions or they accumulate their seeds in the soil, safe from granivores and fire.
- c. Evaders such as rocky-refuge species. These grow in protected sites that rarely burn, or are not exposed to hot fires, or that burn incompletely.

#### **GUIDE TO THE HANDBOOK**

Various stakeholders have legal responsibilities towards managing wildfires and their associated risks. The stakeholders include different spheres of government, both in their regulatory capacity and as landowners, private landowners, and land managers. Other stakeholders are involved in managing wildfires not because they are under a legal obligation to do so but because it forms part of sound land management practices. Many of the stakeholders structure some of their involvement through Fire Protection Associations.

The Handbook aims to assist Fire Protection Associations and other stakeholders involved in Integrated Fire Management to harness best practices and improve service delivery.

The Handbook aims to provide:

- a shared framework for understanding Integrated Fire Management;
- guidelines for setting up and managing a Fire Protection Association;
- tools for implementing Integrated Fire Management 🌓 for use by FPAs and other stakeholders; and
- · links to useful resources.





## CHAPTER ONE INTEGRATED FIRE MANAGEMENT





#### 1 INTEGRATED FIRE MANAGEMENT

#### 1.1 What is Integrated Fire Management?

Integrated Fire Management (IFM) incorporates different fire management activities in a strategic framework to reduce the overall impact of unwanted wildfire damage and promote the beneficial use of fire.

A clear and shared understanding of Integrated Fire Management is key to the success of engaging all stakeholders involved in fire management. Globally and locally there are several definitions and frameworks for understanding Integrated Fire Management. Most of these revolve around a similar group of functions organised in slightly different ways.

The Handbook applies the following definition of Integrated Fire Management:

A series of actions that includes fire awareness activities, fire prevention activities, prescribed burning, resource sharing and co-ordination, fire detection, fire suppression, fire damage rehabilitation and research at local, provincial and national levels in order to create a sustainable and well balanced environment, reduce unwanted wildfire damage, and promote the beneficial use of fire.



A number of key lessons can be drawn from the review of global practices around Integrated Fire Management investigated in New Zealand, Australia, France, and California in the United States including the following:

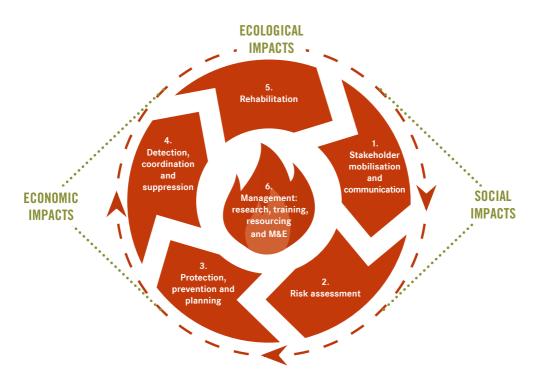
- · the need for high levels of public awareness;
- the need for a holistic and integrated approach to managing wildland fire risks;
- the importance of well-functioning public-private partnerships around wildland fire management;
- the significance of state resources to support Integrated Fire Management; and
- the importance of taking a regional approach that enables resources to be better matched to threats and for resources to be pooled.



#### 1.2 What are the components of Integrated Fire Management?

The diagram below provides a consolidated overview of the six components of IFM and a common framework for discussing and organising efforts around IFM.

#### INTEGRATED FIRE MANAGEMENT



Each of the six components is broadly defined below.

Component	Description	
Stakeholder     mobilisation and     communication	Stakeholder identification and mobilisation including establishment of Fire Protection Associations and the ongoing communication with members of FPAs, landowners within the FPA area who are non-FPA members, and other key stakeholder groupings.	
2. Risk assessment	Framework for assessing and quantifying the wildfire risks in an area based on the area's vegetation type and age, the vegetation fire ecology, history of fire, weather, and the likely impact of fires on life as well as social and economic activities.	
3. Protection, prevention and planning	Activities to reduce or mitigate fire risks including fire awareness, training, fuel-load reduction, firebreak planning and execution, prescribed burning, law enforcement and compliance monitoring, and optimal approaches to suppression.	
4. Detection, coordination and suppression	The detection and monitoring of fires once they are burning, the coordination of stakeholders and resources to fight the fire, and management of suppression activities including incident command during suppression activities.	

5. Rehabilitation	Rehabilitation of damage after a fire in order to restore the ecosystem including identification of rehabilitation needs, planning of rehabilitation, and management of rehabilitation.
6. Management	The overall coordination of IFM, record-keeping and data collection, monitoring and evaluation and reporting to stakeholders, training and research.

Within each of these components there are several different stakeholders, each with its own set of responsibilities and roles, including:

- · landowners and land managers;
- · organised associations of landowners such as conservancies and agricultural associations;
- Fire Protection Associations;
- District and (where delegated) Local Government or Traditional Leaders;
- · Provincial and District Disaster Management;
- · National Government; and
- Working on Fire.

For more information on the roles and responsibilities of different stakeholders under each of the six components see *Integrated Fire Management Roles*.

#### 1.3 What is the Wildland-Urban Interface?

Wildlands are places where there is enough vegetation to sustain a vegetation fire. These areas include nature reserves, vacant land often invaded by woody invasive alien plants, timber plantations, orchards, vineyards, and agricultural land.

The Wildland-Urban Interface is the transition zone between open land that is generally unoccupied and contains flammable vegetation fuels and human settlements, the area where urban development meets wildlands (in town planning this area is sometimes referred to as the "urban edge"), where homes and structures are built among forests, shrubs or grasslands, or where there is a presence of people and permanent infrastructure in the proximity of flammable vegetation.

This is where people live and earn their livelihoods, and it is here where people are exposed to the greatest risk of being injured or killed by wildfires, and property has the greatest potential to be damaged or destroyed by wildfires.



The Wildland-Urban Interface where flammable vegetation meets developments



Homes on the Wildland-Urban Interface are at risk from wildfire

As urbanisation spreads and urban populations increase, the buffers between the urban edge and natural areas disappear. In addition, more residences are being built within the natural areas. As a result, the number of buildings and homes damaged by wildfires is increasing drastically. It is on this interface that wildfires can cause the greatest harm and communities living in the vicinity of it are at greater risk from wildfires.

The majority of wildfires start on the Wildland-Urban Interface and are mostly caused by humans. The risk of wildfires starting from human settlements is exacerbated in South Africa by the number of informal settlements located on the urban edge (in the Wildland-Urban interface).

Integrated Fire Management strategies must proactively manage the interface and reduce the damage caused to it. In addition it should limit the number of fires that emanate from human settlements abutting on the interface, or from homes and human infrastructure such as roads located within the natural areas.

#### 1.4 What are the different types of fires and burns?

IFM uses specific terminology to describe the types of fires and burning conditions. Some of these are listed below.

Term	Description
Arson fire	An uncontrolled fire wilfully ignited by anyone to burn or spread to vegetation or property without consent of the owner or his/her agent.
Block burn	A prescribed burn in a pre-determined and specified land area.
Brush fire	A fire burning in vegetation that is predominantly shrubs, brush, and scrub growth.
Catastrophic fire	A fire that causes unrecoverable damage to property, loss of life and limb. In plantations, the area is more than 100 ha (250 acres).
Controlled fire	A fire that is subject to a line of control around a fire, any spot fire from it, and any interior island to be saved, effectively preventing any unplanned spread.
Controlled burn	Often incorrectly used to refer to a "Prescribed burn". See "Controlled fire".
Crown fire	A fire that burns in and advances through the top leaves or the crown of trees or shrubs.

18

Term	Description
Debris burning fire	A fire spreading from any fire originally ignited to clear land or burn rubbish, garbage, crop stubble, or meadows (excluding incendiary fires).
Ecological burn	A form of prescribed burning involving the treatment of vegetation by burning it in predetermined areas to achieve specified ecological objectives.
Fire	In this context, either a wildfire or a prescribed burn.
Forest fire	A fire burning mainly in a forest and/or woodland.
Fuel reduction burn	The planned application of fire to reduce hazardous fuel quantities, and undertaken in prescribed environmental conditions within defined boundaries.
Ground fire	A fire that is burning below the surface of the ground in roots, peat, coal, decaying plant material, etc.
Human-caused fire	Any fire caused directly or indirectly by a person.
Megafires	A wildfire or concurrent series of wildfires that is in the upper percentile of the fire regime.
Open burn	Burning of wastes in the open or in an open dump.
Out-of-control fire	A fire that has reached the intensity where no attempt is or can be made to stop the head of the fire using a direct attack. Only the flanks can be attacked.
Point of ignition or fire origin	The place where a fire was started or ignited.
Prescribed burn	The controlled application of fire under specified environmental conditions to a predetermined area and at the time, intensity, and rate of spread required to attain planned resource management objectives. It is undertaken in specified environmental conditions. Generally, it requires the specific authorisation of the fire management authority.
Prescribed fire	Any fire ignited by management actions to meet specific objectives. A written, approved burn plan must exist, and approving agency requirements (where applicable) must be met, prior to ignition.
Spot fire	Isolated fire started ahead of the main fire by sparks, embers or other ignited material, sometimes to a distance of several kilometres.
Structural fire	A fire originating in or burning any part or all of a building or shelter.
Surface fire	Fire that moves through combustible material located on the ground.
Uncontrolled fire	Any fire that threatens to destroy life, property, or natural resources, and (a) is not burning within the confines of firebreaks, or (b) is burning with such intensity that it could not be readily extinguished with ordinary, commonly available tools.
Veldfire	Described in the NVFFA as "a veld, forest, or mountain fire". A vegetation fire outside the urban-rural interface; a general term to describe fire in vegetation. In this context these forms of fire are collectively referred to as "wildfires".
Wildfire	A vegetation fire accidently or deliberately ignited but burning out of control, including veld and forest fires.
Wildland fire	A fire burning outside the urban areas, either as a prescribed burn or as a wildfire.



## CHAPTER **TWO**LEGAL FRAMEWORK





#### 2 LEGAL FRAMEWORK

#### 2.1 General overview

Various pieces of legislation impact on Integrated Fire Management and set out mandates for different stakeholders. This legislation stipulates that various government departments, spheres of government, and the private sector are mandated to deal with aspects of Integrated Fire Management responsibilities. In many cases these mandates overlap, in others there is a lack of clarity. While the inconsistencies and overlaps can be easily addressed through cooperative governance agreements and structures, it makes for a complex institutional context.

The following pieces of legislation have been identified as having a direct bearing on Integrated Fire Management in South Africa:

- a. The Constitution of the Republic of South Africa, 1996;
- b. Local Government: Municipal Systems Act (Act 32 of 2000);
- c. Local Government: Municipal Structures Act (Act 117 of 1998);
- d. Disaster Management Act (Act 57 of 2002);
- e. Fire Brigade Services Act (Act 99 of 1987);
- f. National Veld and Forest Fire Act (Act 101 of 1998);
- g. Conservation of Agricultural Resources Act (Act 43 of 1983);
- h. Environment Conservation Act ("ECA") (Act 73 of 1989);
- i. National Environmental Management Act ("NEMA") (Act 107 of 1998);
- j. National Environmental Management: Air Quality Management Act (Act 39 of 2004);
- k. National Environmental Management: Biodiversity Act (Act 10 of 2004);
- I. National Environmental Management: Protected Areas Act (Act 57 of 2003);
- m. National Environmental Management: Protected Areas Amendment Act (Act 15 of 2009);
- n. Pollution Prevention Act (Act 45 of 1965);
- o. National Forests Act (Act 84 of 1998);
- p. National Heritage Resources Act (Act 25 of 1999);
- g. National Parks Act (Act 57 of 1976);
- r. National Water Act (Act 36 of 1998);
- s. Western Cape Environmental Implementation Plan November 2002; and
- t. Western Cape Planning and Development Act (Act 7 of 1999).

In addition, the following legislative developments may have an impact on Integrated Fire Management.

- Discussion paper on Fire Brigade Services Legislation: Towards a Fire Brigade Services White Paper, Department of Cooperative Governance, March 2013;
- ii. Draft National Veld and Forest Fire Amendment Bill.

In this section an overview of the most relevant of these is provided.

### 2.2 Local Government Municipal Structures Act (Act No. 117 of 1998)

The Department of Cooperative Government and Traditional Affairs administers the Local Government Municipal Structures Act. The Act provides for the establishment of municipalities in accordance with the requirements relating to categories and types of municipality. It also provides for the appropriate division of functions and powers between categories of municipalities.

Section 84 of the Act deals with the division of functions and powers between district and local municipalities and provides that a district municipality has the following functions and powers in relation to fire fighting services:

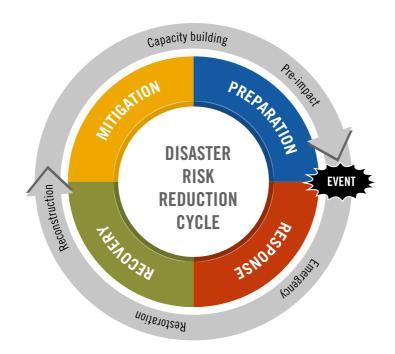
- planning, coordination, and regulation of fire services;
- · specialised fire fighting services such as mountain, veld, and chemical fire services;
- · coordination of the standardisation of infrastructure, vehicles, equipment, and procedures; and
- · training of fire officers.

As regards Integrated Fire Management, it is accepted that this Act allocates the primary regulation and management of wildfires to the district municipalities. Where local municipalities have institutional capacity, this responsibility has been delegated from the district municipality to the local municipality via a cooperation agreement.

#### 2.3 Disaster Management Act (Act No. 57 of 2002)

The Department of Cooperative Government and Traditional Affairs administers the Disaster Management Act. The Act provides for an integrated and coordinated disaster management policy that focuses on preventing or reducing the risk of disasters, mitigating the severity of disasters, emergency preparedness, rapid and effective response to disasters, and post-disaster recovery amongst others. Fires, including wildland fires, are a major hazard to the country and are regarded as one of the potential disaster areas. The Act requires each sphere of government to prepare a disaster management plan and mandates provinces and districts to respond to such disasters.

**Note:** The principal act was amended in December 2015. Act 57 of 2002 must be read in conjunction with the Amendment Act (Act No.16 of 2015).



Section 42 of the Act states that the district municipality must establish a disaster management strategy. Section 32 states that a disaster management centre must promote an integrated and coordinated approach to disaster management in the municipal area, with special emphasis on prevention and mitigation, and coordinate other spheres of government and role-players. Section 30(1)(b) creates an obligation on the service to adopt proactive mitigation, which would include mitigation of wildfires:

#### "30. (1) A provincial disaster management centre -

- (b) must promote an integrated and coordinated approach to disaster management in the province, with special emphasis on prevention and mitigation. By –
- (i) provincial organs of state in the province; and
- (ii) other role-players involved in disaster management in the province"

The Act gives the executive of the province the overarching control of a provincial disaster, with powers that override those of the Chief Fire Officer of a service within an affected municipality:

"40. (1) The executive of a province is primarily responsible for the co-ordination and management of provincial disasters that occur in the province, irrespective of whether a provincial state of disaster has been declared in terms of section 31".

The executive of the province, in adopting proactive mitigation steps designed to minimise the likelihood or impact of severe wildfires, therefore may set certain requirements for district and local authorities and other stakeholders. The Disaster Management Act thus provides for the establishment of the framework within which Integrated Fire Management must take place.

#### 2.4 Fire Brigade Services Act (Act No. 99 of 1987)

The Department of Cooperative Government and Traditional Affairs administers the Fire Brigade Services Act. The Act is the primary piece of legislation regulating fire services and seeks to provide for the establishment, maintenance, employment, coordination, and standardisation of fire brigade services.

In terms of the Act, district and local municipalities are required to establish a fire fighting service. The Act also provides for the Minister to designate fire fighting services. Further, it provides for the appointment of a Chief Fire Officer, the introduction of fees for the service, and the conclusion of agreements with other fire services so as to render a more efficient fire service.

The Act is currently being reviewed, a process that is likely to result in a shift toward a greater emphasis on fire prevention and, given the pressures and demands resulting from global warming and climate change, more emphasis on the interface between the service and disaster management.

#### 2.5 National Veld and Forest Fire Act (Act No. 101 of 1998)

The National Veld and Forest Fire Act (NVFFA) is one attempt on the part of government in South Africa to control wildland fires, and is administered by the Department of Agriculture, Forestry and Fisheries (DAFF).

The NVFFA is specific to wildland fires and outlines the responsibilities and mandates of both public and private bodies in respect of wildland fires, covering both their ignition and the conditions under which they are able to spread. The Act does this by providing, inter alia, for the establishment of Fire Protection Associations (FPAs) and the adoption of a fire danger rating system. It creates specific duties around fire prevention and fire fighting. It also provides for the designation by the Minister of a body as a fire brigade service. In some areas FPAs have been designated as this service.

#### National Environmental Management Act (NEMA) (Act No. 107 of 1998)

The National Environmental Management Act, which is administered by the Department of Environmental Affairs (DEA), provides for the management of natural resources. To the extent that many of our land-scapes are fire-dependent and fire-adapted, wildland fires have a significant impact, both positive and negative, on natural resources, with the result that the Department has embarked on a wildfire management initiative under the umbrella of the Working on Fire Programme.

#### 2.7 Municipal by-laws

Some municipalities have adopted by-laws that impact Integrated Fire Management. These include by-laws intended to address nuisances - including fires - and which provide a basis for dealing with properties that are infested with fire-prone material, and by-laws that restrict burning of open fires without a permit. However, in developing a sound Integrated Fire Management programme, various issues have emerged with municipal by-laws.

- 1. The failure of by-laws to provide adequate legal means for reducing fuel load on properties, particularly in the form of invasive alien vegetation.
- 2. There is often a conflict between municipal prohibitions on open fires and the need to conduct ecological burns in periods of relatively high fire risk.

#### 2.8 Comment

The legal context is complex with overlapping mandates in some areas. If all the organs of state tasked with regulating and managing wildfires are capacitated and functioning, then wildfire management is a District Municipal competence. FPAs, acting within their fire management and business plans, policies, rules and regulations, are the primary institutions regulating the relationship between different landowners, whether private or public, and between landowners and regulatory bodies, but this must be affected within the framework set by other legislation.

## CHAPTER THREE LANDOWNERS AND FIRE





#### 3 LANDOWNERS AND FIRE

#### 3.1 Why should landowners look to manage wildfire?

It makes good business sense and landowners are legally obliged to do so.

Wildfires can cause extensive social, economic, and environmental harm. At a local level, individuals and communities feel this harm. To reduce this harm, the NVFFA creates various duties and obligations for landowners. Regardless of the legal obligations, however, a proactive approach to the management of wildfires can help reduce the harm, loss of productivity, disruption, and loss of opportunity that inevitably follows in the wake of an uncontrolled fire. This proactive approach lies in the adoption of an Integrated Fire Management system.

### 3.2 What are the legal duties of landowners in respect of wildfire prevention as detailed in the NVFFA?

Legally, the NVFFA imposes a number of duties on individual landowners that are intended to reduce the harm from wildfires.

- You may not start a wildfire (s 18(1)).
- You may only start a fire, including a cooking or braai fire, in a designated area.
- You must have equipment available to fight wildfires (s 17(1)).
- You must have trained personnel available to fight wildfires (s 17(1).
- You must have a person on the property who keeps a lookout for fires (s 17(2)).
- You must establish a system of firebreaks (s 12).
- You may not burn firebreaks or carry out controlled burns when the Fire Danger Index is high or the FPA has objected to such burning taking place.
- You must manage the fuel load on land under your control. This means that you must remove invasive alien vegetation from the land, as well as other vegetation that creates unwanted fuel loads.

### 3.3 What is the presumption of negligence in relation to wildfires?

Section 34 of the NVFFA creates a presumption of negligence in relation to wildfires.

- If a person bringing a civil claim against a landowner proves that:
  - he or she suffered loss;
  - the loss was caused by a wildfire; and
  - the wildfire started on or spread from land owned by the landowner;
- The landowner against whom the claim is made is presumed to have acted negligently in relation to the wildfire unless:
  - the landowner proves that he or she was not negligent; or
  - the landowner is a member of an FPA in the area where the fire occurred, in which case the person bringing the claim must prove that he or she was negligent.

Clearly, the easiest way to avoid the presumption of negligence is to become a member of an FPA.



FPAs draw up fire management plans to minimise the fire risk on a landowner's property

#### 3.4 FAQ: Why should landowners join an FPA?

Removing the presumption of negligence simply by being a member of an FPA provides a compelling reason to join an FPA. It is for this reason that insurance companies will often grant a rebate on premiums for those who are members of FPAs.

Added to that, landowners have to comply with the National Veld and Forest Fire Act whether they belong to an FPA or not.

FPAs help their members to fulfil their legal responsibilities by providing advice and guidance on how to reduce the wildfire risk. FPAs also help members by coordinating activities before, during, and after fires, and over the period of the fire season.

# CHAPTER FOUR FIRE PROTECTION ASSOCIATIONS





#### 4 FIRE PROTECTION ASSOCIATIONS (FPA)

#### 4.1 What is an FPA?

A Fire Protection Association (FPA) is an organisation formed by landowners to predict, prevent, manage, and help fight wildfires in an area in order to protect lives, livelihoods, property, and the environment. Further, it is an organisation that has been registered as an FPA by the Minister responsible for the administration of the National Veld and Forest Fire Act (Act 101 of 1998).

#### 4.2 What is the role and what are the duties of an FPA?

According to the NVFFA, s 3(1) a Fire Protection Association must at meet at least the following minimum requirements.

- · Develop and apply a wildfire management strategy for its area.
- Provide, in the strategy, for agreed mechanisms for the coordination of actions with adjoining Fire Protection Associations in the event of a fire crossing boundaries.
- Make rules to be lodged with the Minister, which bind its members and that provide for:
  - the minimum standards to be maintained by members in relation to all aspects of wildfire;
  - prevention and readiness for fire fighting;
  - controlled burning to conserve ecosystems and reduce the fire danger; and
  - any other matter which is necessary for the Fire Protection Association to achieve its objectives.
- · Identify the ecological conditions that affect the fire danger.
- Regularly communicate the fire danger rating referred to in sections 9 and 10 to its members.
- Organise and train its members in fire fighting, management, and prevention.
- Inform its members of equipment and technology available for preventing and fighting wildfires.
- Provide management services, training and support for communities, in their efforts to manage and control wildfires.
- Supply the Minister at least once every 12 months with statistics about wildfires in its area.
- Furnish any information requested by the Minister in order to prepare or maintain the fire danger rating system.
- Exercise the powers and perform the duties delegated to it by the Minister.
- Appoint a Fire Protection Officer, unless a municipality is a member.

#### 4.3 FAQ: Is the FPA a fire fighting force?

No. The NVFFA requires landowners to have enough trained staff and fire fighting equipment to stand a reasonable chance of preventing fires and stopping them from spreading to adjacent properties. Landowners have to comply with the NVFFA, whether they belong to an FPA or not. FPAs help their members to fulfil their legal responsibilities by providing advice and guidance about how to reduce the risk of wildfires. The FPA is a platform for landowners to coordinate efforts and share resources during fire incidents. In circumstances where there is no fire brigade service some FPAs have expanded their mandate to include this role.



A landowner's vehicle, fitted with fire fighting equipment

#### 4.4 Who has a right and who is obliged to be a member of an FPA?

- All landowners in an area for which a Fire Protection Association has been registered have a right to
  join the Fire Protection Association, provided they undertake to abide by its constitution and rules
  (NVFFA 1998, s 4(6)).
- The owner in respect of State land must join any Fire Protection Association registered in the area in which the land lies (NVFFA 1998, s 4(8)).
- The municipality for the area in which an FPA is registered must become a member if it has a service (NVFFA 1998, s 4(7)(a)).
- Where there is a designated service in the area in which an FPA has been established, the designated service must become a member of the Fire Protection Association (NVFFA 1998, s 4(7)(b)).



Any landowner in an area for which an FPA has been registered has the right to join the FPA

### 4.5 FPA as a point of interface: who are the typical stakeholders in an FPA?

Ideally, FPAs are a membership-based organisation for landowners and land managers and a partnership forum to enable coordination between landowners and regulators as well as between landowners and wildfire and land management decision makers in the public sector.

The table below provides an overview of the typical stakeholders and the role of each in the business planning process. Members are as outlined above by the Act. Partners are other stakeholders with overlapping or related mandates.

Category	Description	Role
Private landowners	All private, community, and small industrial property owners who reside in areas which have regular wildfires,	Members
	a risk of wildfire and relatively uniform climate/ vegetation – organised into FMU and engaged via representatives.	
Large industry private landowners	Large-scale industry landholders who operate in areas that have fire risks.	Members
Public entities	Public entities with landholdings such as Eskom, Telkom, Transnet and SANRAL.	Members and Partners
Public landowners	All government departments and entities, which own land in areas, which have regular wildfires and/or a risk of wildfire.	Members
Conservation agencies	All conservation agencies (public and private) that own land in areas that have regular wildfires and/or a risk of wildfire.	Members and Partners
Communities and Traditional Leaders	Traditional leaders and rural communities that may be affected by wildfires.	Members and Partners
Local and District Fire Brigade Services	District and, where they exist and perform wildfire functions, local fire brigade services.	Member and Partner
Government departments	DAFF, DEA, Departments of Agriculture and Public Works.	Partners
Disaster Management	PDMC, District Fire Working Groups, District DM operation centres.	Partners
Organisations working with landowners	Institutions such as organised agricultural associations that represent members' interests or organisations such as insurance companies that service members.	Partners

### 4.6 What role do Fire Protection Associations (FPAs) play in the Wildland-Urban Interface?

Wildland fires do not respect boundaries. It is important that all landowners work together to manage them. The National Veld and Forest Fire Act enables landowners to form FPAs that are legal entities and provide an institutional structure, with various legal powers, within which wildfires can be managed. FPAs further provide a vehicle for improving communication between all landowners, local authorities, and the responsible national government departments that are engaging in the regulation and management of wildfires.

Communities living in the Wildland-Urban Interface, irrespective of whether their land is held in trust by the State or is privately owned, should become members of the local FPA. This is best resolved if the community has a committee that can represent it at the executive level of the FPA. In so doing the contribution made by the community to fire management in the area can be considerably expanded. At the same time the community will derive significant benefit from membership.

By working with surrounding communities Fire Protection Associations can strengthen their fire management efforts. Properties of private landowners and smaller communities border each other and through Fire Protection Associations the common goal of more effective fire management through improved practices can be achieved.

# 4.7 Informal Communities in the Wildland-Urban Interface and Fire Protection Associations

Wildfires occur throughout South Africa, from the savannahs in the west, throughout the vast grasslands in the hinterland, all the way to the threatened fynbos systems of the Western and Eastern Cape Provinces. Large communities, both urban and rural, are exposed to the destructive impacts of these uncontrolled fires. Livestock and valuable assets are lost, human casualties are inflicted and, all too frequently, lives are lost.



Informal dwellings destroyed in an uncontrolled fire

Developing populations have expanded into the natural areas and are increasingly exposed to wildfire hazards. Communities exposed to wildfires not only include poor rural communities, informal settlements, but also those living in upmarket developments. Many poor communities have a history of living with fire, using it for cooking, improving grazing, hunting, or clearing land. The lack of basic resources, however, has placed many of these communities at risk during the annual fire season.

There are initiatives to empower interested poor communities to take responsibility for reducing the risk of uncontrolled fires in their areas. This involves a collaborative planning process to transfer knowledge and skills on wildfire prevention, protection and response.

These communities are more than just places where people live, work and raise their children. They comprise and include the relationships, partnerships, attitudes and values binding people, businesses, organisations, and agencies that collectively motivate them to achieve common goals. A stable community provides a sense of security, serenity, comfort, and neighbourliness. Effective partnerships can resolve the challenges of dealing with poor communities in hazardous wildland and urban interface areas. The benefits of partnerships include the sharing of ideas, expertise, and knowledge, as well as the sharing of fire protection responsibilities.

These communities do not function in isolation. They border on, and simultaneously impact on, neighbouring communities that may be carrying out a variety of different activities, such as forestry or

agriculture. Very often they border on formally structured communities who already practice active wildfire management. There may even be a registered Fire Protection Association in the area. It is important that these activities and communities be identified, that alliances are formed, and that effective, sustainable communities are established.

Most importantly, authorities, at both Local and District Municipality level, should be identified, included in, and notified of initial IFM objectives within these communities.

# 4.8 Who can register as an FPA?

According to the NVFFA, seven types of organisations may be registered as FPAs.

- A fire control committee or regional fire control committee established under section 19 of the Forest Act, 1984 (Act No.122 of 1984).
- A conservation committee established under section 15 of the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983).
- A catchment management agency established under section 78 of the National Water Act, 1998 (Act No. 36 of 1998).
- Any nature conservancy established in terms of any ordinance of any Province.
- A fire protection committee established under section 7 of the Mountain Catchment Areas Act, 1970 (Act No. 63 of 1970).
- A disaster management agency established in terms of any law passed for the management of disasters.
- Any voluntary association in existence at the time of the promulgation of the NVFFA, which has as one of its objectives the prevention and combating of wildfires, or any committee of such an association.



# Fact or fiction? A limited liability company can be registered as an FPA.

Fiction. As the NVFFA is currently formulated, it gives a detailed list of entities that may be registered as an FPA. They are either statutory bodies created in terms of other legislation or voluntary associations.

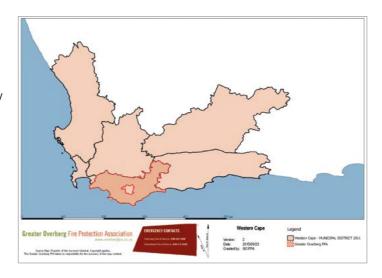
# 4.9 What is the ideal geographic scale for an FPA?

According to section 3(2) of the NVFFA an FPA may be established for an area that has:

- 1. regular wildfires; or
- 2. a relatively uniform risk of wildfire: or
- 3. relatively uniform climatic conditions; or
- 4. relatively uniform types of forest or vegetation.

The NVFFA does not expressly provide further criteria for delineating the boundaries between different FPAs.

Where all the stakeholders are operational, a consolidated offering is, as far as possible, recommended. There is good logic for aligning FPA boundaries with other administrative boundaries, whether



by district or local municipality, while having regard to vegetation type and commonality of risk. This facilitates a coordinated Integrated Fire Management strategy and the sharing of resources.

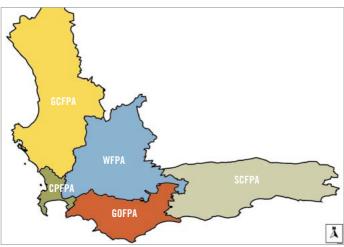
This configuration also opens up the possibility of FPAs exploring both grants-in-aid and sole-supplier agreements with District Municipalities to support FPAs.

# 4.10 FPA boundaries

One size does not fit all. Integrated Fire Management requires differentiated institutional models. The model applied in a particular area will depend on the capacity of the State at a national, provincial and district level, the capacity of the private sector, as well as the nature of the terrain and the type of vegetation in the area. A review of FPAs across the country highlighted a range of possible permutations for an FPA structure. The capacity of the various fire brigade services, the landowners, and the partners all impact on the preferred institutional arrangements. But generally the rule seems to be that alignment either at municipal or district level is optimal.

In the Western Cape section of the Fynbos Biome, FPAs have been largely consolidated at a District level. This has been driven by:

- an acknowledgement of the central role of District Municipalities in wildfire management, in accordance with the legal mandates set out in the Structures Act;
- a willingness on the behalf of Chief Fire Officers of the District Municipalities to play an active role in the FPA, whether as the FPO of the FPA or not;
- the active involvement or commitment to be involved of disaster management, CFOs at district level, District Disaster Management Fire Working Groups, and the Western Cape Province Disaster Management team, and the need to align FPA activities with their activities;
- a view that where functioning fire brigade services exist, the primary functions of the FPA is risk
  management, fire management planning, and stakeholder mobilisation and participation; and
- a costing exercise that suggests a minimum number of FPA members is needed to constitute
  a financially viable and sustainable FPA, with capacity to offer the above services (minimum of
  500 members and ideally more than 1 200 members).



### Western Cape FPA boundaries



# Did you know?

The NVFFA provides for exclusive territorial jurisdiction and does not allow for the boundaries of different FPAs to overlap. There can only be one FPA registered for a particular geographical area. Where two FPAs have registered for the same the geographical area the first registered FPA takes precedence.

# 4.11 How should an FPA be structured internally?

An FPA represents the point of interface between landowners and land managers managing fire-prone land. It also represents the point of interface between these landowners and land managers and government officials responsible for administering legislation regulating wildfire management. The structure of the FPA needs to take both these sectors into account and provide a vehicle to regulate the relationship between these groups.

The details of the structure will be informed by how the FPA is established and which of the institutional models, as outlined by the NVFFA, the FPA decides to follow.



# 4.12 What makes for a successful FPA?

The following factors contribute to the success of an FPA.

- An FPO or FPA Manager with excellent knowledge of the area, good relations with landowners, and a comprehensive understanding of the fire history of the area.
- An FPA that is responsive to the needs of landowners as well as the context in which they
  work. Where there are no functioning fire brigade services or where these services have
  limited capacity, FPAs have provided the service to members or have made it possible for
  members to access a service. Where the services exist, FPAs have been able to focus on
  more strategic functions and other aspects of Integrated Fire Management.
- A willingness and ability to work collaboratively with stakeholders and operate through a range of partnerships.
- A minimum scale to provide the services needed to enable the FPA to discharge its obligations in terms of the NVFFA, to assist landowners who are members to do likewise and, ultimately, to help landowners to better manage the risk of wildfires.
- Recognition of stakeholder fatigue arising from multiple forums and demands on their time and aligned meetings and services with disaster management and/or agriculture.
- Existence of dedicated capacity and clear directed leadership to function optimally.
- · Excellent systems and good communication.



An FPA manager shares his knowledge of the area with landowners

# 4.13 How are FPA members organised?

FPA members are often dispersed across a broad geographic area and there is a need for a localised and more personalised level of the membership organisation within the FPA.

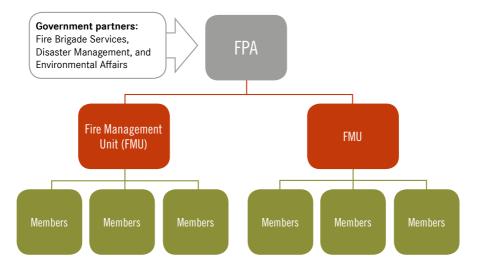
# 4.13.1 Fire Management Units

Fire Management Units (sometimes referred to as wards or cells) organise smaller groupings of landowners and divide the countryside into smaller geographical areas, thus making the physical and social characteristics easier to identify and manage. FMU boundaries should be aligned with local municipal boundaries or existing organisational structures such as conservancies and farmers' associations, farming types, and organic units based on communication and logistics.



A Fire Management Planning Guide is attached.

The diagram below offers a useful model for thinking about a structure through which the individual members engage with the other different stakeholders.



The Fire Management Unit provides a local forum through which individual members can coordinate their response to fire management, share information, realign and establish firebreaks, pool fire suppression resources, and build fire-management capacity on the ground. A representative of each FMU should be part of the governance committee of the FPA.

# 4.13.2 What main role players does the law expressly provide for?

# 4.13.2.1 The Fire Protection Officer (FPO)

Every FPA must have a Fire Protection Officer whose role is prescribed in section 6(1) of the National Veld and Forest Fire Act. In terms of section 6(2)(a) of the NVFFA where a municipality is a member of the FPA and has a service, or where a designated service is a member, the Chief Fire Officer is the Fire Protection Officer, unless they decide to delegate this authority to another person. Where the post is vacant, or the incumbent chooses not to exercise his or her right, the members of the FPA may nominate a FPO who is then appointed and registered as such by the responsible minister.

The role of the FPO is outlined below.

- Perform the function of Chief Executive Officer of the FPA.
- Carry out the tasks assigned to him or her by the FPA or its Executive Committee.

- Take control of any fire fighting in the area for which the FPA has been formed, if:
  - the wildfire is a threat to life or property; and
  - they are reasonably able to do so.
- Enforce the rules of the FPA.
- · Monitor and report, to the association and the Minister, on compliance with the NVFFA.
- Train the members of the FPA.
- Inspect the members' land to ensure that there is compliance with their duties and obligations in terms of the NVFFA and the rules and regulations of the FPA.

A CFO who assumes the role of the FPO, may delegate specific functions as defined above to the FPA manager or another person. For example, in the case of the Greater Overberg FPA, the CFO assumed the role of FPO but delegated the roles of the CEO of the FPA function to the FPA manager. In practice, this means that day-to-day prevention and mitigation falls under the purview of the FPA manager while the detection and suppression of wildfires falls under the CFO.

# 4.13.2.2 Chief Fire Officer (CFO)

According to the NVFFA, the Chief Fire Officer is the official responsible for and the head of fire services at local government level. In terms of the Municipal Structures Act, district municipalities are responsible for wildfire management and local municipalities for structural fires. This is not the case everywhere.

In practice, local and district government resources vary. In some areas, the Chief Fire Officer of the district is actively involved in managing fires while in others it falls to the local municipality. In some places, the Chief Fire Officer actively manages a highly resourced service. In others, the positions are vacant or the service is either under-resourced or, in some instances, non-existent.

Where the post is filled and the service is active, best practice suggests the Chief Fire Officer of the District Municipality should:

- be a member of and attend all FPA meetings (it being assumed that the FPA operates at a district level);
- assume the formal role of FPO (if it is not to be assumed it must be formally delegated to another nominated person);
- nominate an official of the service to attend any Fire Management Unit meetings; and
- delegate the activities outside of suppression and enforcement to the FPA manager.



# Did you know?

The Municipal Structures Act (Act No. 117 of 1998) provides the appropriate division of functions and powers between categories of municipalities as indicated below.

- 83. (1) A municipality has the functions and powers assigned to it in terms of sections 156 and 229 of the Constitution.
  - (2) The functions and powers referred to in subsection (1) must be divided in the case of a district municipality and the local municipalities within the area of the district municipality, as set out in this Chapter.
- 84. (1) A district municipality has the following functions and powers:
  - (a) Integrated development planning for the district municipality as a whole, including a framework for integrated development plans for the local municipalities within the area of the district municipality, taking into account the integrated development plans of those local municipalities.
  - (j) Fire fighting services serving the area of the district municipality as a whole.

# 4.13.2.3 FPA Manager

FPA members are mainly landowners with multiple responsibilities. This generally means they have limited time to service the FPA outside of their legal responsibilities as a landowner. This has resulted in the appointment of FPA managers on a part or full-time basis to drive the FPA programme and mobilise and work with members.

Where FPA managers exist, the FPA Governing Body appoints them, whether it is a board or a committee, and they have the following functions:

- a. coordinating the activities of the FPA and reporting to the FPA Governing Body;
- b. facilitating the activities of members, through the Fire Management Units;
- c. managing partnerships and external relations; and
- d. fulfilling any functions of the FPO that are delegated to them.

The table below provides a recommended division of responsibilities for IFM, assuming the state has an appointed CFO and capacity, the CFO is the FPO and delegates some of the role of FPO to the manager, and a FPA manager is in place.

	Chief Fire Officer	Fire Protection Officer	FPA manager
Risk assessment	Fire ecology, history and behaviour.  Proper mapping to inform decision-making.  Quantification of risk – social, environmental and economic.	Proper mapping to inform decision-making.  Quantification of risk – social, environmental and economic.	Capacity and resource audits.
Stakeholder organisation	Fire-awareness information.	Enforce the rules of the association.	Fire-awareness information.  Mobilise landowners into the FPA.  Enforce the rules of the association.
Fire management planning	Responsible for Disaster Management Strategy and the fire component of this.	Ensure that an IFM strategy is in place. Fire prevention actions and support. Powers of arrest, search, and seizure to enforce the NVFFA.	Develop and apply the IFM strategy for the region.  Assist members with fire management planning to prevent or minimise the impact of wildfires.  Consult with Municipalities and Fire Brigade Services in the development and application of the IFM strategy.
Detection and suppression	Provide Fire Brigade Services to assist with the suppression of fires.	Take control of any wildfire fighting if the fire is a threat to life and property.  Train members in the law, prevention, management, and control of fires as well as the rules of the FPA.	Inform members of equipment and technology available for preventing and fighting fires.  Organise the training of members in fire fighting, management and prevention.  Be part of the ICS team engaged in the coordination of stakeholders.

42

	Chief Fire Officer	Fire Protection Officer	FPA manager
Rehabilitation	None	None	Facilitate engagement with relevant role players, particularly in government, on behalf of members.
			Landowners are responsible for land management and rehabilitation in terms of CARA.
Record- keeping and Monitoring & Evaluation	Records of all fire suppression actions and of all disasters.	Monitor and report on compliance with the NVFFA to the FPA and the Minister.	Apply systems to enable the proper functioning of the FPA.  Furnish the Minister with information to prepare and maintain the fire danger rating system.
			Supply the FPO and Minister with wildfire statistics and other relevant information.

# 4.13.2.4 Appointing an FPA Manager

Practice has shown that an FPA requires dedicated management capacity in order to be effective.

According to the governance provisions above, FPA Managers report to the Chairperson of the FPA and to the local authority CFO, and should do so on a monthly basis at least to both. These are two of the many relationships that need to be effectively managed by the FPA manager in order to ensure the success of the FPA.

The following are some of the key deliverables generally required of an FPA Manager.

- 1) For an FPA in the process of establishment, formalise the FPA including:
  - a) finalising the Constitution and Memorandum of Incorporation (MOI);
  - b) finalising rules and regulations for the FPA;
  - c) facilitating the process of the establishment of the FPA executive and board;
  - d) starting the application process for non-profit organisation (NPO) status;
  - e) recruiting additional staff as funding becomes available; and
  - f) developing and agreeing on the service offering to members.
- 2) Assist and work with the operational support staff to:
  - a) complete the application to DAFF for the establishment of the FPA and then dealing with DAFF in regard to its annual requirements;
  - b) communicate with the prospective members to ensure they are aware of the process and how it will impact on them;
  - c) prepare newsletters;
  - d) establish and manage a FPA website; and
  - e) consolidate and update the member database.
- 3) Work with the Treasurer and auditors to:
  - a) establish or revise proposals on the FPA fee structure;
  - b) update and revise the FPA budget;
  - c) facilitate the sending out of annual invoices;

- d) assess the funding requirements for the full staffing team and assist with raising funds for this team; and
- e) attend to matters relating to the registration of the FPA name with SARS, registration with CIPRO, and other related administrative functions.
- 4) Facilitate the establishment of Fire Management Units and area management units, with a view to establishing wall-to-wall Fire Management Units.
- 5) Build the FPA including:
  - a) working with neighbouring FPAs; and
  - b) managing recruitment of additional FPA members to increase membership to the desired 75% coverage.
- 6) Ensuring an up-to-date:
  - a) map of the area;
  - b) database of FPA membership; and
  - c) database of resources available.
- Assisting members with arrangements for fire fighting training, and rolling out a training programme for the area.
- 8) Maintaining a firebreak network database.
- Assisting members with the application of burning permits, firebreak specifications, and identifying areas where fuel reduction is required.
- 10) Establish or update the FPA Integrated Fire Management plan including an audit of FPA resources and gaps. To undertake this the auditor/consultant must:
  - a) ensure that the area is mapped and captured in ArcView and Google Earth;
  - ensure the database of membership and landholding is up-to-date and captured in a programme that can interface with ArcView and Google Earth;
  - c) establish a mapping layer showing risk; and
  - d) hold management unit meetings to revise and update the fire plan, for presentation to the Governing Body annually for approval.
- 11) Mobilise resources and multi-stakeholder engagement in IFM including:
  - a) compiling funding applications to the UFPA and Working on Fire (WoF) for the management posts;
  - b) facilitating the relationship and collaboration between the FPA and the District Municipality Fire Working Group to ensure maximum integration;
  - c) facilitating the relationship and partnership between the FPA and the various agricultural associations;
  - d) facilitating the relationship and partnership between the FPA and conservation agencies;
  - e) mobilising and facilitating resources for fuel-load reduction; and
  - f) mobilising other resources to secure the financial sustainability of the FPA.
- 12) Attend meetings of the Provincial FPA.
- 13) Ensure regular reporting to:
  - a) the Governing Body of the FPA; and
  - b) the Department in terms of the NVFFA.



# 4.13.3 Governance

# 4.13.3.1 How is the FPA governed?

As a legal entity, whether or not it is established as a voluntary association or non-profit organisation (NPO), an FPA needs to comply with standard good-governance practices as outlined in the King Commission Report. This is particularly important if FPAs are hoping to be recipients of either government or donor funds.

# 4.13.3.2 Independent Governing Body

In terms of these standard governance practices, each FPA needs:

- a. an independent Governing Body, nominated and elected by its membership, that is responsible for overseeing the functioning of the FPA;
- b. staff members employed for the day-to-day management of the FPA who are accountable to the Governing Body but who are not represented directly on the Governing Body; and
- c. persons in oversight positions (but they may not be paid officials of the same institution).



Fire Management Units in the Southern Cape FPA

# 4.13.3.3 Landowner representation

Given the objective of achieving wall-to-wall FPAs, it is desirable that within FPAs there are wall-to-wall FMUs, and that there be adequate representation of each of the FMUs on the Governing Body. Representatives should be members of the FPA.

However, it is also necessary to ensure that the Governing Body is able to exercise effective oversight. A bloated Governing Body often results in Governing Body members failing to take governance responsibility. As a rule of thumb, it is recommended that a Governing Body should not exceed ten members. In order to achieve effective governance, it is recommended that different FMUs be conglomerated. Where the FPA is structured at a district level, this conglomeration may be according to municipal areas with one representative for each municipal area or by land use with representatives by land use on the FPA Governing Body.



# Case studies on membership models

# Lowveld and Escarpment FPA (LEFPA)

The Lowveld and Escarpment Fire Protection Association (LEFPA), registered in 2004 in terms of the *National Veld and Forest Fire Act*, is one of the more established FPAs in South Africa. LEFPA has about 600 members, with combined land

holdings of about 980 000 hectares in a total area of 1.8 million ha. All the large corporate growers as well as commercial farmers, municipalities, and the Mpumalanga Tourism and Parks Board are members. The forestry companies play a leading role in LEFPA, contributing the bulk of the funding and strategic management input. They also represent 46% of the landholdings under LEFPA.

In order to protect the interests and investment of larger landowners, the FPA has categorised membership into four categories namely forestry industry, agriculture, conservation, and municipal/residential. Each group is afforded votes on the Governance Body. In this way the FPA has been able to ensure the larger landowners, representing the bulk of hectares under the FPA, are not outvoted by smaller members' interests. As forestry represents the largest landholdings, it has two votes and each of the other categories has one vote.

### **Greater Overberg FPA (GOFPA)**

The GOFPA established in 2014 has a few hundred members. Most of the members are farmers. It has organised these members into geographically defined Fire Management Units. These are largely aligned with municipal areas. Each FMU has a representative and vote on the FPA Governing Body to ensure each unit has equal say in all decisions.

#### 4.13.3.4 Government officials

As far as government officials responsible for regulating legislation are concerned, the Chief Fire Officer has various roles and responsibilities in terms of the National Veld and Forest Fire Act, the Fire Brigade Services Act and the Disaster Management Act, and the fire advisor of the Department of Agriculture, Forestry and Fisheries has responsibilities for the administration of the National Veld and Forest Fire Act.

To facilitate the partnership, it is recommended that one government official from each department responsible for regulating wildfires, needs to be represented on the Governing Body (i.e. DAFF, CFO for Disaster Management and Wildfires at the Municipality and DEA)

Government officials responsible for implementing legislation relating to the regulation of wildfires should not serve on the FPA in an executive capacity but should rather be *ex officio* members of the Governing Body of the FPA.

In some instances the fire advisor employed by DAFF, who is responsible for the implementation of the NVFFA, also serves in a management capacity within the FPA. Unless the FPA structures are internalised within government, such a dual role is likely to give rise to a conflict of interest. In such circumstances, the responsible official should rather serve as an *ex officio* member of the Governing Body of the FPA and abstain from voting on any decisions by the Governing Body.



Working on Fire firefighters



Working on Fire aerial support

# 4.13.3.5 The Working on Fire Programme

The government assists with the management of wildfires through the Working on Fire programme, which is under the jurisdiction of the Department of Environmental Affairs and administered by a private entity contracted to government for that purpose. A large part of the business of the FPA involves managing the relationship between the FPA and the Government's WoF Programme, as well as exercising a degree of oversight over its implementation. Concerns have been expressed about potential conflicts of interest that arise if officials funded by WoF are also responsible for this oversight. No members of the Governing Body should be remunerated in any way through the WoF programme. However, it is recommended that a representative of WoF should participate in every meeting of the Governing Body as an observer and provide assistance to the FPA in accordance with the planning and resources of the WoF Programme.

#### 4.13.3.6 FPA structure





# **Lessons: Optimising FPA governance**

The following is a list of recommendations extracted from best practice around the country and is intended to help FPAs function better within a complex legislative and institutional context.

- FPA meetings and District Fire Working Group meetings, convened in terms of the Disaster Management Act, should be integrated into a single meeting convened on a quarterly basis, and the activities of the Provincial UFPA and the Provincial Fire Working Group should be similarly integrated.
- Bilateral agreements should be concluded between individual FPAs and the relevant district and local municipalities, setting out the roles and responsibilities of CFOs (either as CFOs or as FPOs), FPAs and FPA managers and associated funding flows.
- FPA Managers have dual lines of reporting to the Chairperson of the FPA and to the CFO of the district.
- Where local government has functioning fire brigade services, the key role of an FPA is aligned with the functions outlined in the NVFFA, namely risk management. Where FPAs develop suppression capacity, either indirectly through members or directly through the FPA itself, this capacity has to be managed subject to the overriding legal powers and control of the CFO (either as CFO or as FPO).
- · All government funding for Integrated Fire Management needs to be aligned with and used to incentivise membership of FPAs.
- · In order to ensure that landowners and land managers are actively engaged in the FPA and to reinforce the importance of the FPA as a membership-based organisation rather than an entity of the State, it is proposed that the Governing Body be chaired by a landowner or land manager and not by the Chief Fire Officer or other official responsible for regulation.

# 4.13.3.7 FPA constitution

Every FPA is required to draft a constitution and a business plan to govern its activities. The constitution needs to include provisions for the structuring of the FPA, its geographic scope, duties, membership and executive functioning.



These are outlined in the *FPA Model Constitution* template attached.

#### 4.13.3.8 FPA rules

In addition to the constitution, several FPAs have also developed rules to guide the day-to-day operations and activities of its members prior to and during fire season. The National Veld and Forest Fire Act 101 of 1998 (chapters 4 and 5) guides the rules and minimum requirements for members.

Below are some of the key areas that the FPA rules need to cover:

- a. Members' duties in IFM around prevention, mitigation, detection, and suppression;
- b. Members' FPA related duties;
- c. Members' prohibitions;
- d. minimum standards for compliance; and
- e. liabilities.



A set of FPA rules, adapted from the rules of the Southern Cape FPA, is attached as an example.

# 4.14 Membership administration

Each FPA offers tailored services. Member benefits vary depending on these services. Some of the specific benefits are linked to fire prevention and suppression services.

# 4.14.1 Membership recruitment

However, there is a range of others. The list below provides some generic benefits:

- a. providing fire awareness information and materials;
- managing the relationship with government and other role players and lobbying for support, equipment and coordination;
- c. improved coordination of fire management in your area;
- d. providing subsidised training in fire fighting for members;
- e. providing information on fire danger warnings and wildfire activity; and
- f. communicating members' needs and concerns to umbrella bodies.

Being clear on the benefits of the FPA is essential when recruiting potential members who want to know why they should join the FPA and what benefits it will afford them.

# 4.14.2 Membership application forms

Once the hearts and minds battle has been won and landowners have agreed to join an FPA, the next challenge is ensuring that there are systems for managing members efficiently and effectively. This starts with ensuring the right information is collected upon registration, including property information, landowner contact details, and available resources.



See the *Pro-forma membership application form* for details.

# 4.14.3 Membership fees

Most FPAs are reliant on membership fees to provide the necessary services and benefits to members. Across the country FPAs have pegged their fees at different levels using different methodologies and systems.

Most FPAs charge a joining fee, almost like an administration fee when members join. If membership is suspended due to non-payment of fees and the person wishes to reinstate membership, this fee is again payable.

Annual fees are also paid. The most common ways of structuring annual fees are:

- a. a per hectare rate with a minimum threshold (see LEFPA);
- b. a flat rate for different categories of land-holdings (see SCFPA); and
- c. a flat rate per landowner.

FPA fees also vary based on the services offered. Some FPAs have linked their fees to services with scaled rates linked to levels of services needed.



# LEFPA and SCFPA membership

**LEFPA** has tiers of fees according to the type of protection required – most members are basic members.

Membership Tier	Benefits	Fee	
Basic Members	Access to the Working on Fire Teams.  No access to any Aerial Resources.  Discounted rates on training.	Per hectare rate with basic minimum fee.	
Aircrafts	First-call status on Spotters and Helicopters (Will also have second-call on fixed wings).	A higher per hectare rate and minimum fee.	
Fixed Wing – Second call	Second call on fixed wing bombers (available to Helicopter members).	An even higher per hectare rate.	
Fixed Wing	First-call status on Bombers as well as Helicopters	A per hectare rate with a minimum fee.	

**SCFPA** has a flat rate for different categories of landholdings under a certain amount of hectares, and then a per hectare rate for private landowners, scaled flat rates for commercial and gated estates, and a flat rate for government as detailed below.

Private landow	ners	Gated estates	Commercial landowners – forestry/ tourism/ industry	Government/ Conservation
<25 ha	Min flat fee		Scaled flat rate between private and gated based on size of land holdings.	Flat rate regardless of size.
25-50 ha	Min flat fee			
50-100 ha	Min flat fee	Scaled flat		
100-300 ha	Higher flat fee	rate based on size, which is		
300-500 ha	Per hectare rate	a lot higher than private or		
500-1000 ha	Per hectare rate	commercial.		
1000-2000 ha	Per hectare rate			
>2025 ha	Per hectare rate			
SOE land	Per hectare rate			
SOE servitude	Per hectare rate			

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# CHAPTER FIVE THE LEGAL PROCESS FOR SETTING UP AN FPA





# 5 WHAT IS THE LEGAL PROCESS FOR SETTING UP AND **REGISTERING AN FPA?**

The Department follows a two-phased approach in registering an FPA. The initial phase enables the Department to ensure that, broadly speaking, the FPA has the support of owners and its boundaries make sense. The subsequent phase, which entails a lot more work, deals with the formal requirements that must be met to ensure that the FPA is properly structured and is likely to be functional.

Did you know? The NVFFA only provides for exclusive territorial jurisdiction and does not allow for overlapping FPA boundaries.

For more information see the FPA registration letter and information pack from DAFF.

# 5.1 What does the Department require in the initial phase of setting up an FPA?

To set up an FPA, first engage with the Department fire advisor and establish whether or not an FPA exists for the area. If not, decide whether:

- a. the boundaries of another FPA are to be expanded to incorporate the proposed area (see the procedure set out below); or
- b. a new FPA is to be registered.

# If a new FPA is to be registered:

- obtain Form 1 Application for registration of a fire protection association Part 1

- and Guidelines to Assess form 1 P and
- obtain advice of the Fire Advisor on completion of Form 1.

Convene a meeting of interested parties at which it is necessary to:

- adopt a resolution, in principle, that an FPA is to be established;
- adopt a proposed name for the FPA that is unique within the metropolis or district;
- decide on the proposed members;
- appoint an interim convenor; and
- decide on the boundaries of the proposed FPA.

Complete Form 1, submit to, and obtain the approval of the Chief Fire Officer.

The Chief Fire Officer must then:

- evaluate Form 1;
- make a recommendation to the Department Head Office; and
- forward the documentation to Head Office for final approval.

The Department will assess the completed Form 1 to determine if:

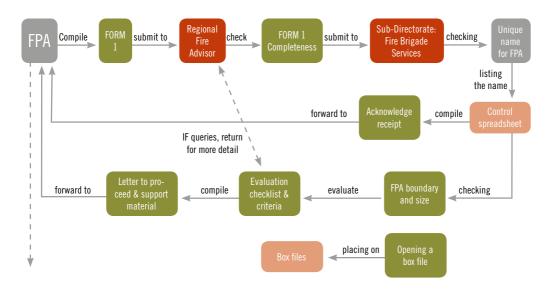
- the FPA's name is unique within its metropolis or district;
- no owner has been deliberately excluded from discussions about setting up the FPA;
- the boundaries:
  - are suitable with regard to the requirements for veldfire management in the area;
  - allow owners to organise effectively; and
  - have been chosen in the interests of the population as a whole within the metropolis or district.
- no other FPA exists or is planned within the area;

- the chief fire officer (CFO) approves (if one or more exist); and
- the Departmental regional representative or Fire Advisor recommends that the registration should proceed.

If approved, the Department will:

- enter the name of the proposed FPA onto a database; and
- · advise the Fire Advisor who must inform the proponents that the FPA can proceed with incorporation.

# **BUSINESS PROCESS: INTENTION TO REGISTER AN FPA**



# 5.2 What does the Department require in the second phase of setting up an FPA?

Once notice has been received from the Department of the approval of Form 1, the proponents of the FPA must follow certain steps.

**STEP 1:** Engage with the Fire Advisor around the completion of *Form 2 – Application for the Registration of a Fire Protection Association and for the Registration of the Fire Protection Officer - and prepare the following documentation:* 

- a. a draft constitution setting out proposed structure of the proposed FPA;
- b. a draft map of the proposed FPA;
- c. a draft business plan which includes the veldfire management strategy; and
- d. the draft rules of the FPA.

# STEP 2: Engage with the CFO, if there is one, to decide:

- a. who will be the FPO; and
- b. if the CFO is to be the FPO, whether any powers are to be; and
- c. notify interested parties of the date of the proposed founding meeting.

STEP 3: The proponents of the FPA must constitute the founding meeting of the proposed FPA at which it is necessary to:

- a. take an attendance register of those present;
- b. keep minutes;
- c. adopt specific resolutions relating to the following:
  - i. adopting the constitution of the FPA;
  - ii. approving a map of the area of the FPA;
  - iii. appointing the FPO;
  - iv. approving the business plan of the FPA, which includes the wildfire management strategy; and
  - v. approving the rules of the FPA.

STEP 4: Following on from the founding meeting, attend to internal management, including:

- a. opening a bank account for the FPA;
- b. embarking on FPA management pending registration; and
- c. completing Form 2.

**STEP 5:** Commence registration process with the Department by sending a letter to the Fire Advisor enclosing the following:

- a. Form 2, duly completed;
- b. minutes of the founding meeting;
- c. copies of the following documents:
  - the resolutions adopting the constitution, the boundaries of the FPA, the business plan and the rules of the FPA;
  - ii. the constitution of the FPA;
  - iii. a map of the boundaries of the FPA;
  - iv. the resolution relating to the appointment of the FPO;
  - v. the business plan, which includes the wildfire management strategy; and
  - vi. the rules of the FPA.

The Fire Advisor must consider the documentation and make a recommendation to the Department, acting on behalf of the Minister.

The Minister must consider Form 2 and the supporting documentation, including the recommendation of the Fire Advisor, and decide whether the FPA will be registered. An FPA will be registered if it is capable and representative.

In order to determine the capability of the candidate FPA, the Minister will consider the contents of the business plan to see the following:

- the degree to which the veldfire management strategy addresses the wildfire risk in the FPA's area;
- · the fitness of the rules;
- the resources available to the FPA including support from an umbrella FPA;
- · evidence of co-operation between the FPA and the CFO;
- evidence of support by the municipality for the FPA;
- · the competency of the FPO; and
- any other information that the minister deems relevant information.

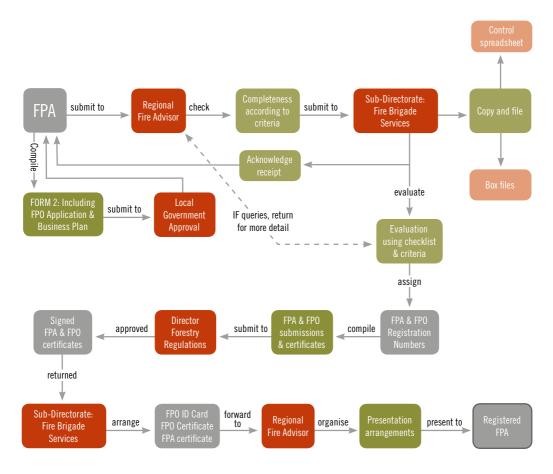
In order to determine the representivity of the FPA, the Minister will consider:

- the proportion of the area of the FPA represented by the FPA;
- any objections made to the FPA's establishment;
- any evidence of the exclusion of an owner or category of owner;
- any evidence that vulnerable owners or assets have been unreasonably excluded; and
- · any other relevant information.

The Minister may decide along the following lines.

- 1) Refuse to register the FPA, in which case he or she must state in writing within a reasonable time the reasons and steps that can be taken to rectify any shortcomings.
- 2) Refuse registration until the FPA has fulfilled certain conditions, in which event the Department must:
  - a. inform the FPA in writing of the conditions to be fulfilled;
  - b. once the conditions are fulfilled:
    - enter the FPA into a register; and
    - issue a registration certificate and number.
- 3) Register the FPA without conditions, in which case the Department will:
  - a. enter the FPA in a register;
  - b. issue a registration certificate and number; and
  - c. notify FPA and Fire Advisor of registration.
- 4) Register the FPA, but subject to certain conditions that must be fulfilled after registration, the Department must:
  - a. enter the FPA into the register and issue a registration certificate and number;
  - b. inform the FPA of the conditions and the time period within which it must fulfil them; and
  - c. If the FPA fails to fulfil the conditions, it must be deregistered after being given a reasonable opportunity to remedy its failure.

# **BUSINESS PROCESS: FPA AND FPO REGISTRATION**





# What has been learnt about setting up FPAs?

- 1. It takes time to jump through the legal hoops.
- It takes time for public sector bodies to commit time, resources, and even sign up as members.
- 3. You need to have a clear plan to sustain interest and membership.
- 4. Success in responding to a fire and in preparing for a fire season are the best mobilisers of private landowners.
- 5. Frequent and relevant communication with members is key.

# Did you know?

There are additional requirements of the Department relating to the business of the FPA.



• If the boundaries of an FPA change, Form 3 – Notification of a Change in the Boundaries of a Fire Protection Association - must be completed and submitted to the Department.

- If the Executive Committee of an FPA changes, Form 4 Notification of a Change in the Membership of the Executive Committee of a Fire Protection Association must be completed and submitted to the Department.
- If a new FPO is appointed for an FPA, Form 5 Notification of the Appointment of a New Fire Protection Officer must be completed and submitted to the Department.



# CHAPTER SIX THE LEGAL PROCESS FOR DEREGISTERING AN FPA





# 6 WHAT IS THE LEGAL PROCESS FOR DEREGISTERING AN FPA?

# 6.1 Deregistration at the instigation of members

Should the members of an existing FPA wish to deregister the FPA, the following is required:

- a legal quorate meeting of the FPA must be convened;
- · at the meeting:
  - a record of attendees to be kept;
  - a resolution to de-register the FPA must be adopted, which must state:
    - the FPA name;
    - · resolve the Minister be required to deregister the FPA;
    - provide the reasons for the de-registration; and
    - · indicate what will happen to the assets of the FPA upon de-registration;
- the resolution and record of attendees must be submitted to the Department for approval.

# 6.2 Deregistration at the instigation of the Department

Without being requested to by the members, the Minister may decide to deregister an FPA if:

- 1. the FPA has failed to deliver an annual report for two successive years; and
- 2. the FPA is unable to execute its duties required by section 5 of the Act.

Regulations set out process by which deregistration will happen.

# 6.3 Process following on the decision of the Minister to deregister an FPA

If the Minister decides to deregister an FPA the Department will:

- · inform the FPA in writing of its deregistration;
- record the deregistration in the register of FPAs; and
- withdraw the FPA's registration certificate and number.



# CHAPTER SEVEN RESOURCING AN FPA

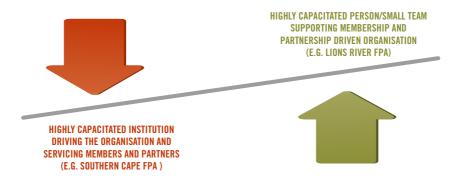




# 7 RESOURCING AN FPA

# 7.1 FPA management models

FPAs are resourced in different ways. A review of FPAs globally and across South Africa provides a spectrum of options for resourcing FPAs ranging from a lean small management team with the activities of the FPA largely driven by the membership to a large well-resourced institution driven by staff capacity.



Given the global and local financial situation, pressures on government resources and the challenges of sustaining the human capital required to drive Integrated Fire Management, leaner structures are likely to be more prolific and, to secure the longer term sustainability of Fire Protection Associations, should be encouraged.



# Case study

The Lions River FPA employs two people part-time. One is the FPA manager, a highly skilled, natural resource manager, and formally registered as Fire Protection Officer (FPO) in terms of the legal requirements of the NVFFA. The position of FPO manager is remunerated by the FPA. However, as the FPA cannot afford to fund a full-time post,

he is engaged for 30-40% of his time. The amount of time given by him to the FPA increases during fire season. The other person is a part-time secretary who manages the database and attends to administration. Other resources are either contracted in or supplied via volunteers (local farmers/landowners). This model is lean but with a high level capacity.

At the other end of the spectrum - in the Southern Cape FPA - the DAFF Fire Advisor serves as the General Manager of the FPA. The position is funded by DAFF. He has a complement of 12 staff members. The FPA directly employs or co-funds five staff members consisting of two area managers, two administrators and a GIS person. The office has three Global Environmental Facility (GEF) funded positions: an operational support and communications person and two Extension Officers. There are various Working on Fire operational staff members responsible for managing WoF teams and aerial resources. The office would like to employ a further three people to serve as the base manager's supervisor, an operational manager, and an additional operational support person.

# 7.2 Financial reporting requirements of the Department

The Department requires that:

- · FPA financial years run from 1 April to 31 March; and
- Annual reports of FPAs including annual financial reports must be submitted to the Department by 30 June every year.

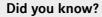
# 7.3 Finances

How FPAs are financed varies depending on the role and services of the FPA, its capacity, its partnerships, and the available resources of members. Based on a review of functioning FPAs, an annual budget of at least R350 000 is needed to run an FPA. This fee should be largely recoverable from membership fees.

Item	Quantity	Monthly Cost	Annual Total	Budget Total (ideal)	Budget total (min)
Staff				R 888 000	R 252 000
Manager	12	15 000	180 000		180 000
Area manager	12	10 000	120 000		
Area manager	12	10 000	120 000		
Area manager	12	10 000	120 000		
Administrator/GIS	12	6 000	72 000		72 000
Administrator	12	8 000	96 000		
Operational and Communication support	12	15 000	180 000		
Administration				77 000	22 000
Postage	1	1 000	1 000		
Telecommunications (manager)	12	1 500	18 000		18 000
Telecommunications (3 x area managers)	12	3 000	36 000		
Office	12	500	6 000		
Catering budget	6	1 000	6 000		
Stationary	12	500	6 000		500
Audit fee	1	3 000	3 000		3 000
Banking Charges	1	1 000	1 000		500
Marketing				16 000	6 000
Advertising	1	10 000	10 000		
Website	12	500	6 000		6 000
Transport & Logistics				108 000	36 000
Fuel, and S&T	12	3 000	36 000		36 000
Fuel, and S&T	24	3 000	72 000		
Vehicle	0	10 000	0		
Training				80 000	20 000
Training of members	1	80 000	80 000		20 000
Fire Management Plan					20 000
Development of Fire Management Plan	1	100 000	100 000		20 000
Other Commitments				11 000	10 000
UFPA	1	10 000	10 000		10 000
Insurance	1	1 000	1 000		
Total Expenditure				R 1 180 000	R 366 000

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As an FPA expands the basket of services it provides, so its budget needs to increase. This is evidenced in the varying guideline budget above, which can increase as much as three-fold, depending on the level of service supplied.



The SCFPA has the largest budget of any FPA in the country. In 2014, it was around R3-million, 50% of which was covered by membership fees and partner contributions. LEFPA, which has large commercial interests and contributions, had, in 2014, a budget of approximately R2-million, entirely funded by members.

# 7.4 Funding

FACT

Possible sources of funding for FPAs are detailed in the table below with links to examples of FPAs who have sourced such funding.

Funding source	Implications for FPA activities	Example
Disaster Management	Need to provide a service to disaster management.	SCFPA has a sole provider agreement with Eden District Disaster Management and receives funding for wildfire management services. In addition, SCFPA has provided non-fire related services to Disaster Management in, for example, the event of a large oil spill.
Local Government	FPA must perform a function government recognises.	LRFPA has a grant-in-aid agreement with the Lions River Municipality and receives funding for assisting with wildfire management.
Management Fees	FPA can implement a programme for government or the private sector and receive a fee.	GCFPA applied for and has received approval to implement a large landowner incentive programme for the Department of Environmental Affairs.
Commission	FPAs can negotiate bulk discounts with private sector providers – insurance, equipment providers – and charge an administration commission.	LRFPA has an agreement with an equipment provider that allows members a 25% discount on fire equipment. Of this, 5% is retained by the FPA to cover administration and management.
Donor funding	Various FPAs have applied to donors and the private sector for donations.	SCFPA receives small amounts from private sector donors and an allocation from the District that is paid as a service payment.
Working on Fire	Working on Fire receives funding from the Department of Environmental Affairs for IFM. In terms of the agree- ment with DEA, FPAs can access a small portion of this funding.	Several FPAs around the country receive funding for an FPA manager from Working on Fire pursuant to its mandate to provide support to FPAs and assist with their development. In addition, some FPAs receive funding for hosting a Working on Fire team in terms of operational requirements of the parties.

#### 7.4.1 Funding by local authorities

To date FPAs have received funding from municipal government in two forms.

# 1. Service provider

The first form of securing funding from local authorities is as a service provider who is paid to deliver a service. This is arranged as a service provider agreement in which the District contracts with the FPA to deliver fire management services to the municipality and its citizens.

#### 2. Grant-in-Aid

A second method of paying FPAs is for the Municipality to provide a  $\{f\}$  grant-in-aid. This means the allocation/contribution of municipal funds to an organisation or body outside any sphere of government, which does not constitute a commercial or business transaction. Normally, in this context "organisation" means an organisation as contemplated in Section 67 of the Municipal Finance Management Act, which is either registered in terms of Section 13 of the Non Profit Organisations Act, 1997 or a company incorporated as a non-profit company in terms of the Companies Act, 2008, or an organ of state or properly constituted community, welfare, or voluntary organisation.



(Tool 11) A motivation for financial assistance to the municipality is attached by way of example.



# SERVICE PROVIDER FUNDING MODEL

# Eden District Municipality pays SCFPA for services annually.

This is arranged as a sole service provider agreement in which the District contracts with the SCFPA - as the only organisation, or sole provider, capable of delivering the fire management services required by the district municipality.

# **GRANT-IN-AID FUNDING MODEL**

#### Lions River FPA receives money using this mechanism.

In the case of the Lions River FPA, the uMngeni Municipality provides a grant to the FPA to provide a service to its citizens on a not-for-profit basis.

In both instances, the transfer of funds is a win-win situation as the FPA is able to stretch this funding a lot further than a Municipality could through actions such as buying second-hand equipment where appropriate, cost-sharing, and negotiating for better prices outside of the confines of the state procurement

In both instances, and in order to secure a sustained funding flow from the local authority to the FPA, it is desirable that Integrated Fire Management forms an integral part of the Integrated Development Plan of the relevant local authority, that there is a budget line provision for it, and that the principle of securing the service through the FPA is recognised.

68 **FYNBOSFIRE** 

# CHAPTER **EIGHT**FPA MEDIA PROFILE





# 8 FPA MEDIA PROFILE

Veldfires are becoming more frequent. Increased annual temperatures have impacted on the occurrence and spread of veldfires. At the same time, we have seen a growth of urban populations within areas prone to veldfires.

# 8.1 Fire Awareness

An educated and informed public is a safe public. Managers need to budget and prepare for fire awareness projects in their areas of concern. The focus should be on areas of high risk, for example, school children playing with fire during the school holidays. In this case, schools would need to be included in a programme launched and run before the start of the fire season.

Remember that the community residing in each Wildland-Urban Interface will vary and any awareness campaign needs to be tailored specifically for that community. There is no "one size fits all" for awareness campaigns. Awareness campaigns need to be community specific in terms of material, should have clear objectives, opportunities for feedback, and importantly, need to be part of a greater and integrated management plan.

# 8.2 Media

The most efficient way to get information to the public, the constituents served by the FPA, is through the local media. The media can, and should, be used to disseminate information about the operations, goals, mission, and services of the FPA.

Twitter and Facebook have enabled the public to spread news more rapidly, and printed media have become more efficient at publishing veldfire stories that tend to make head-lines more often.

Social media can be a powerful tool if managed properly. Some of the benefits include:

saving lives through rapid communication;



Newspaper articles



Twitter

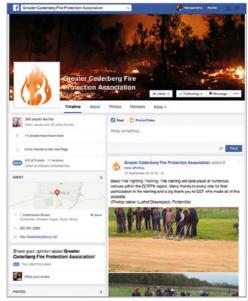


Website

- communicating (more) effectively and directly with constituents;
- · reaching a larger group of constituents;
- · building situational awareness;
- responding to new, incorrect, or conflicting information;
- building community resilience through prevention, mitigation, and preparedness efforts by the promotion of participation and building mutual trust in the community; and
- · fostering transparency and accountability.

## 8.3 Emergency alerts and warnings

One role of the FPA may be to compile and disseminate emergency alerts, warnings, and evacuation procedures to the public during a severe fire. Emergency alerts and warnings are intended to achieve two outcomes:



Facebook

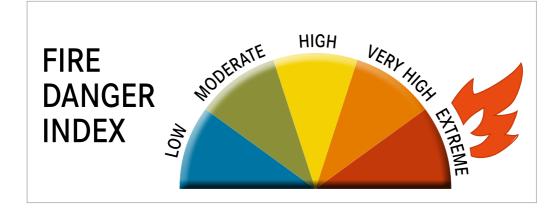
- inform the community of an impending or current threat; and
- · promote appropriate responsive actions.

## There are a number of specific pieces of information that should be included in an emergency warning.

- 1) the name/title of warning;
- 2) who is issuing the warning;
- 3) the type of threat (and preferably a description);
- 4) how likely it is to happen;
- 5) how bad it is expected to be;
- 6) where the threat applies and who is affected;
- 7) when it is expected to happen;
- 8) what to do;
- 9) a point of contact for more information or to report events.

#### Section 4 of NVFFA - UFPAs

- (9) Nothing in this Act prevents the formation of an umbrella association for a number of fire protection associations, but a reference in this Act to a fire protection association is not a reference to such an umbrella association.
- (10) An umbrella association may exercise powers under this Act or perform duties in terms of this Act on behalf of a fire protection association if the Minister agrees.



72

# CHAPTER NINE UMBRELLA FPAS





#### 9 UMBRELLA FPAs

#### 9.1 Definition

Umbrella Fire Protection Associations are umbrella structures providing overarching coordination and support to FPAs at a provincial or regional level. The NVFFA provides for the establishment of such structures but does not assign any specific mandates to them. Instead the Act provides for the realignment of mandates by the Minister.

#### 9.2 Role and functions of the UFPA

Experience with FPAs suggests there is a need and role for an Umbrella FPA structure. This is borne out by individual FPA's willingness to pay membership fees to the Umbrella FPAs. To date, the primary role of the UFPAs has been a coordinating one, with some working partnerships occurring in some regions. With the new Working on Fire contract with a private service provider and the expanded recognition of the role of FPAs in Integrated Fire Management, the coordination and oversight role of UFPAs is being strengthened. In the contract the implementing agent, working by implication with UFPAs, is tasked with:

- provincial level strategic policy and planning in respect of prescribed burning, common standards, common rules and regulations, common methodology in respect of membership fees, joint firepreparedness and response-planning, and protection of common assets;
- providing input with regard to the infrastructure for the deployment and co-ordination of fire fighting resources, inclusive of ground and aerial fire-fighting operations;
- assisting and facilitating the necessary resource into techniques for preventing wildfires and streamlining existing procedures nationally;
- facilitating increased awareness and coordinating training to strengthen IFM;
- liaising and coordinating with the provincial disaster management centre;
- · liaising with relevant provincial agencies conservation and other parastatals; and
- mobilising private sector funding to reduce the financial burden on the state of FPA support.

Based on the recognition of these multiple roles, three core functions for the UFPA have been identified, namely:

- a. coordination and oversight;
- b. partnership brokering and management; and
- c. knowledge management.

#### 9.3 Coordination and oversight

Within coordination and oversight, the following role for the UFPA is envisaged:

- coordination between FPAs in the region to ensure a provincial/region-wide strategy, common standards, and common rules and regulations;
- standardisation of systems used by FPAs in the region to enable more effective fire-preparedness, response-planning, and protection of common assets;
- · coordination of a common methodology for levying membership fees;
- rationalisation of common services to increase efficiencies and reduce costs e.g. GIS mapping;
- coordination of inputs with regard to the infrastructure for the deployment and co-ordination of fire
  fighting resources, inclusive of ground and aerial fire fighting operations;
- facilitate increased awareness and coordinate training to strengthen IFM in the region and the
  application of common standards and methods;

- liaison and coordination with the provincial disaster management centre to maximise efficiencies and the impact of efforts;
- liaison with relevant provincial agencies conservation and other parastatals to secure their active
  participation and mobilisation of resources for IFM; and
- monitoring and evaluation including development and execution of FPA audits, peer reviews of FPA
  management team functioning, and similar efforts to achieve improved practices and common
  standards.

Funding for this will come from membership fees and in addition Working on Fire will allocate funds to some FPAs in the short term. Additional income streams to support this work would include administration fees for the execution of provincial disaster management functions, a share of large provincial and national landowner membership fees, and a cut of any corporate income raised.

#### 9.4 Partnership management

The second area of UFPA work is centred on brokering, coordination, and management of partnerships in respect of IFM, Disaster Management, and National Resource management. In order to avoid overlapping roles with FPAs, the UFPA work should be focused on:

- coordination of international partnerships around common areas of interest and with regions with similar biomes;
- · province-wide industry partnerships such as with the insurance industry; and
- development of new institutional partnerships within Natural Resource Management such as around carbon taxes.

Funding for this work would be sourced from any international partnership agreements, the insurance industry, and any provincial-wide programmes developed, such as around carbon taxes. The last page of this chapter lists possible donor programmes of relevance as an example of what it possible.

#### 9.5 Knowledge management

The third pillar of work is around the collation and sharing of knowledge. The UFPA sits on knowledge that would be of value to researchers, industry partners (such as the insurance industry), and academics, both locally and internationally. Linked to knowledge collation, analysis, and sharing is a training role that is already being performed in a limited way. It is therefore proposed that the UFPA be responsible for:

- collation of provincial-wide data analysing trends in Integrated Fire Management;
- participation in IFM and NRM research initiatives; and
- compilation of information on new approaches and lessons in IFM practice.

Harnessing the knowledge could provide an income stream for the UFPA and could enable a UFPA manager to self-fund. A good parallel is the work of various agricultural economists who provide industry-aggregated information to individual farmers, government, and industry bodies. Possible income sources include the sale of knowledge products outside of the public sector and FPA community, research income, training income, and participation in conferences.



76 FYNBOSFIRE ®

#### 9.6 Structure of the UFPA

As with an FPA, it is necessary to distinguish between the governance and executive requirements of the UFPA. In order to achieve effective oversight, it is recommended UFPAs have independent Governing Bodies comprising the following structures.

- The chairpersons of the FPAs (and if an FPA is in the process of being established the representative will be the chairperson of the working committee);
- Government officials with regulatory powers including:
  - provincial disaster management;
  - DAFF regional manager; and
  - DEA or its implementing agent.

For the FPA initiative to mobilise private landowners it is recommended that the chairperson of the UFPA Governing Body be drawn from the FPA representatives. Alternatively, it should be the Provincial Disaster Management representative as the lead agent.

The UFPA will exercise a measure of oversight over the functioning of the WoF programme in the province, therefore none of the FPA representatives on the Governing Body should be funded directly or indirectly by WoF.

The implementation within the province will be driven through the FPAs. It is therefore recommended that an implementing committee be convened, made up of the FPA managers and any management staff employed directly by the UFPA.

#### Board

#### **FPA Chairs**

District FPOs not involved in their FPA

#### Responsible officials

Provincial Disaster Management DFWG chair DAFF Regional Advisor WoF FFA obo DEA

#### Chair

Not funded through WOF

#### **Implementation Committee**

UFPA Manager (appointed or nominated from the FPA Managers)
FPA Managers

#### 9.7 Funding the UFPA

The diagram below provides a summary of the various income sources by function.

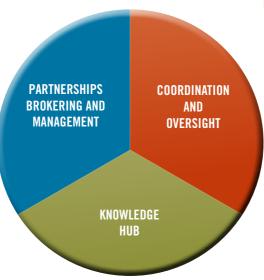
#### **UFPA FUNCTIONS AND INCOME**

#### **INCOME:**

- International partners and funding
- Insurance industry rebate funding
- Private sector partnership brokering such as around carbon trading

#### INCOME:

- Research programme involvement
- Sale of knowledge products
- Conferences
- Tranining



#### INCOME:

- WOF funding
- Administration overheads for provincial DM related services
- Membership fees

### To provide a platform for Umbrella FPA discussion and participation in Integrated Fire Management issues:

- Actively participate in issues related to Integrated Fire Managementt, aerial and ground resources, within South Africa, networking closely with DAFF, all FPAs and other relevant institutions.
- Evaluate and monitor impacts of fire on land use, and facilitate the development of appropriate resources to reduce such impacts within each Umbrella FPA area of operation.
- Assist in the compilation of national documents in respect of Integrated Fire Management providing proposal and plans that may improve aerial and ground operations
- Facilitate and coordinate fire related training for the benefit of the Umbrella FPAs and their respective members.
- Evaluate and guide the implementation of National and Provincial fire related equipment and resources (ground and aerial) for the benefit of the Umbrella FPAs and their respective members.
- Evaluate and guide the implementation of integrated communication, information, management systems and standard operating procedures.
- Facilitate the provision of information, statistics and feedback in relation to Integrated Fire Management issues to Umbrella FPAs, their members and relevant stakeholders.
- To facilitate the overall strategic direction and planning, in terms of the obligations in respect of Umbrella FPAs, as contained within the National Veld & Forest Fire Act 101,1998.

# CHAPTER TEN PRACTICING INTEGRATED FIRE MANAGEMENT





#### 10 PRACTISING INTEGRATED FIRE MANAGEMENT

#### 10.1 The continual process of IFM

Effective fire management is a continual process that involves a number of steps.



This continual process occurs both at a property scale and at a larger public scale. Both scales are important to secure fire safety across the rural landscape.

At a public scale, government authorities should undertake fire management planning as part of their responsibility for public safety and to support communities and industries. This includes developing and implementing plans and documents such as municipal and district fire prevention plans and ensuring that Integrated Fire Management forms part of the Integrated Development Programme.

At a property level, fire management may range from developing and undertaking simple unwritten plans to more complex documented plans. Wherever possible, landowners are encouraged to have a written plan so that it is easier for them to consider fire risk issues on their property and to communicate these issues to others. As part of this process stakeholders need to:

- identify key assets and key fire safety risks, including those from adjacent properties and features;
- · consider other risks such as economic, environmental, and legal risks;
- assess whether the risks identified are relevant and/or significant to the property, by considering the likelihood and consequences of these risks happening;
- · selected interventions that minimise the identified risks; and
- consult and work with adjacent public and private landowners, managers, and land users to achieve fire safety benefits for all involved.

#### 10.2 Integrated Fire Management Plan

FPAs are required to prepare Integrated Fire Management plans in terms of the NVFFA (Section 5(1)a). An IFM plan contains strategic and operational information to support informed decision-making and to assist management and should include concise information on the fire risk and resources in an area.

The level of detail and quality of IFM plans vary across the FPAs and agencies. In reviewing the different IFM plans it became clear that as a FPA consolidates, matures, and expands its membership footprint, so it is able to provide more detail and depth to its IFM plan. In this Handbook, we recommend different levels of detail for different levels of organisational maturity.



Contents	Newly established	Consolidating	Established
Glossary: Definition of any specific terminology used.		Yes	Yes
Introduction: This should introduce the reader to the area covered by the plan, the various Fire Management Units, jurisdictional boundaries, and similar issues. It should also provide some background to the plan and the document outline.	Yes	Yes	Yes
Policy context: The intention of this chapter is to establish the linkage between the legislation, policies, the plan, and actions proposed.	Yes	Yes	Yes
Stakeholder mapping: Mapping of all IFM stakeholders and their interests as well as IFM platforms for collaboration, cross-boundary fire agreements, cooperative and mutual aid fire agreements, and any other relevant partnerships.	Yes	Yes	Yes
Fire Management Units: This section provides details of the various FMUs under the FPA and maps of the area including any specific characteristics or operational issues in the FMUs.	Yes	Yes	Yes
Fire history:			
Overview of vegetation typology, wildfire seasons, fire history and trends.	Yes	Yes	Yes
Detailed mapping of fire history including ignitions, Fire Danger Index readings, burnability, fuel pathways, and fire ecology over the last 10 years.	No	Yes	Yes
Environmental, financial, economic and social impacts of fires.	No	Partial	Yes
Fire mapping and risk assessment:			
Initial mapping fire risk using GIS identifying veld types and fuel- load, veld age, hot spots, and ecologically-sensitive areas across the region (1:50 000).	Yes		
Detailed mapping identifying veld types and fuel-load, veld age, predicted fire hazards, hot spots, and ecologically sensitive areas at FMU level (1:10 000). This should include hazard and burnability maps.		Yes	
Detailed mapping at farm level identifying veld types and fuel- load, veld age, predicted fire hazards, hot spots, social, environ- mental, and economic risks, and ecologically sensitive areas. This should include burnability maps, vegetation age maps, fuel hazard maps, and risk maps.			Yes
Fire prevention and mitigation: Fuel load management plan to mitigate risks and prevent fires including firebreak plan, controlled burn plans, and fuel load reduction plan at:			
Regional scale – high level;	Yes	Yes	Yes
Detailed farm level.			Yes

Contents	Newly established	Consolidating	Established
Capacity assessment:			
Evaluation of current capacity for fire management, detection and suppression, and legal compliance at partnership level and FMU level.	Yes		
At membership level.		Yes	
At farm level.			Yes
Action plan:			
Incident Command System for fire detection and reporting, fire suppression, communication of fire related matters.	Yes	Yes	Yes
Communication:			
Education and awareness plan. Plan to keep members informed. Any media plans and protocols.	Yes	Yes	Yes
On-going M&E and communications:			
Reporting requirements.			
Process to determine whether the IFM plan is being implemented.	Yes	Yes	Yes
On-going data-gathering indicators and system.			

The plan should be updated annually and revised every three years to ensure it is relevant and takes into account changes in land use and risk.

The different components of Integrated Fire Management, as set out in the table above, are interwoven and are relevant throughout the year. However, the level of attention to each may vary according to the seasons. See section 14.7 for more details.



GIS mapping of the Southern Cape FPA boundaries

#### FREQUENTLY ASKED QUESTIONS ABOUT IFM PLANS

What is an IFM Plan?

The IFM Plan is the equivalent of the FPA business plan. It sets out what needs to be done to achieve IFM and the challenges and issues.

Why do FPAs prepare an IFM Plan?

To register under the NVFFA an FPA is required to submit a business plan that is the same as an IFM plan and Section 5 requires them to submit an IFM plan annually.

Who needs to be involved in drafting an IFM Plan?

There is no prescription of who needs to be involved in the drafting of an IFM plan in the NVFFA. Some FPAs contract the task out to a consultant and others engage members and draft the plan collaboratively. Ideally some level of involvement from partners and members is useful as this facilitates the plan becoming a live document that is guiding activities on the ground rather than just a compliance exercise.

#### 10.3 Integrated Fire Management business unit plan

The IFM business unit plan provides a detailed plan for each management unit within the FPA. This plan includes:

- a background and description of the unit and maps of the area;
- list of the available resources equipment, trained personnel, fire services;
- logistical arrangements in the event of firefighters being deployed to fight a fire in the area including:
  - clothing;
  - equipment;
  - transport;
  - first aid:
  - food; and
  - related resources (needed and available);
- localised fire readiness preparations including:
  - fire awareness education;
  - proof of annual fire readiness audits by landowners;
  - fire readiness information and exercises; and
  - dissemination of information on fire danger ratings;
- · action plan on orange and red days including implications for:
  - members;
  - burn permits; and
  - volunteer and employed firefighters;
- · policies and procedures for reporting fires;
- · policies and procedures for controlled burns;
- protocols for handling of emergency situations and uncontrolled burns including:
  - incident command system;
  - fire reporting; and
  - handling of the media in the event of a fire outbreak;
- · procedures for fire post-mortem and statistics reporting; and
- · administration, including information on any forms and systems to be complied with.

For more information on Fire Management Unit planning see the Fire Management Unit Planning Template.





Above: Wildfire plans provide authorities with an overview of fire management measures that are in place

Left: A wildfire plan is a convenient tool to assist in fire fighting operations

#### 10.4 Provincial wildfire plans

Following on from the obligations created in terms of the National Disaster Management Act, some provinces have embarked on a process of developing wildfire plans.

The plans should do the following:

- provide the various responsible fire authorities and agencies within the province with an overview
  of the current arrangements that are in place for the management of veld and forest fires in the
  province;
- provide fire and rescue services, fire prevention associations, volunteer organisations, and landowners with a convenient reference to the key structures and systems available and required to undertake effective and safe fire fighting operations at wildfires in the province;
- · contain an overview of wildfire preparedness, prevention, and response arrangements; and
- reflect an integrated approach and shared responsibility for wildfire management between government, agencies, communities, and individuals.

The wildfire plan developed for the Western Cape can be viewed at https://www.westerncape.gov.za/assets/departments/local-government/Fire\_Brigade\_Services/For\_the\_fire\_service/western\_cape\_provincial\_government\_veld\_fire\_plan\_2014\_2015.pdf



# CHAPTER ELEVEN STAKEHOLDER MOBILISATION





#### 11 STAKEHOLDER MOBILISATION

The interaction between people and fire cannot be avoided. Fire is an integral part of human life — be it in the use of fire for cooking, warmth, or veld-management. In the context of rapid urbanisation, the rampant and haphazard growth of structures, and the increased propensity for fires as a result of climate change, the relationship between humans and fires has become more complicated.

Humans are responsible for starting the majority of wildfires and the only solution to effective fire management is to engage people and move the public from being part of the problem to being an active part of the solution. Fire awareness activities must involve the community and other groups in



Integrated Fire Management. A well-informed public is less likely to use fire irresponsibly and is also more likely to be a fire detection resource. FPAs, government, and conservation agencies all have a responsibility to raise awareness.

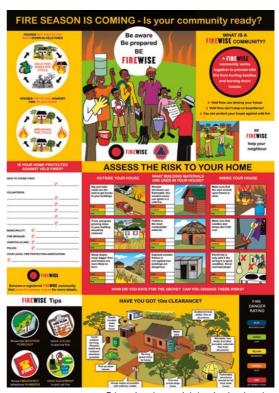
Education provides people with an understanding of the risks of wildfires, and the measures the community can take to minimize these risks. Different types of programmes are needed for different audiences.

#### 11.1 Integrated Fire Management awareness

IFM awareness takes many forms.

- information in the public media (digital and paper) about IFM, which works well for the general public;
- information in social media and other digital forms, which works well for targeted interest groups and young people;
- direct communication works well for landowners;
- structured talks and lessons work well for schools and NGOs;
- radio and television campaigns and information in local newspapers work well for communities;
- conferences work well for scientists and academics;
- public notices in fire prone areas alerting people to the dangers work well for walkers, cyclists, and tourists.

Campaigns need to provide advice on issues such as open fire management and safety, campfire safety, conducting controlled burns, burning of rubbish outdoors, proper disposal of cigarette butts, fuel load reduction, the law, and landscaping as a tool to reduce fire risks.



Educational material that is circulated to promote fire awareness

#### 11.2 How to mobilise stakeholders

There are three principle ways of mobilising stakeholder around IFM.

- a) Convince landowners and interested parties of the value in working together and sharing resources and skills to reduce risks.
- b) Inform them of their obligations and responsibilities in terms of the law.
- c) Galvanise action after a fire, when people are alerted to the risks and issues.

#### Case study of Cape Peninsula Fire Prevention Association (CPFPA)

The CPFPA was established in 2000 when landowners identified the need to act proactively to reduce risks after that year's damaging fires. Over the past 15 years, the FPA has provided members with services but has struggled to expand its base. However, after the fires of 2015, over R3-million was raised towards volunteer fire fighting. It also provided a platform to educate the public about wildfires and wildfire prevention, saw landowners taking action against non-compliant landowners with high fuel loads on their properties, and resulted in communities working together across traditional divides.

#### 11.3 Sustaining stakeholder engagement

Much of the stakeholder mobilisation requires collaborative leadership skills where the FPA management and executive work to mobilise diverse and, at times, conflicting interests towards a common interest - namely reducing fire risks and increasing fire preparedness. This requires the FPA management team to do the following:

- spend time listening to stakeholders' interests;
- engage stakeholders in collective problem-solving and action;
- manage conflicts constructively;
- · navigate the fine line between persuasion and enforcement; and,
- most importantly, build confidence and trust through action and success.

In the words of an FMU executive member, "Landowners will only be galvanised to add real value if they feel the benefits. Until then it is just a compliance exercise for them."



90 FYNBOSFIRE

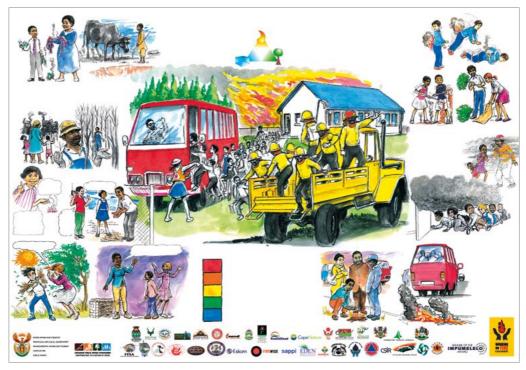
# CHAPTER TWELVE THE FIREWISE COMMUNITIES PROGRAMME





#### 12 THE FIREWISE COMMUNITIES PROGRAMME

Fire is necessary for an ecosystem to function, and because ecosystems are fire-adapted, fire is inevitable in many parts of the country. Thus, wherever possible, fires need to take place in a managed and controlled way so as to reduce the risk to lives and property. Over time, because of the exclusion of fire, there has been a build-up of fire fuels. This is detrimental to ecosystem health, can affect the productive capacity of agricultural lands, and can promote circumstances that lead to uncontrollable conflagrations.



The FireWise Communities Programme interacts directly with communities at risk from wildfires

The risk of damaging wildfires is made worse by the increase in lands infested by invasive alien plants. The Wildland-Urban Interface – areas where human habitation borders and mixes with open veld – is increasing. Many of these areas are remote and cannot depend upon authorities to protect or respond during a fire. Increasing the coping skills and resilience of such communities is desirable. This is in line with international disaster management practice and South Africa's Disaster Management Act of 2002.

The FireWise Communities Programme was initiated in 2005 as a multi-stakeholder advocacy and awareness platform, able to interact directly with communities at risk from wildfires, aiming to change public and community behaviour, and reduce unwanted ignitions to limit the frequency of damaging wildfires. FireWise concepts are fully integrated with the aim of promoting Integrated Fire Management, the internationally accepted principles of Community–Based Fire Management and the broader environmental duty-of-care goal.

The overall objective of the FireWise Communities Programme is to empower interested communities to take responsibility for reducing the risk of uncontrolled fires in their areas. This is achieved by using the collaborative FireWise planning process to transfer knowledge and skills on wildfire prevention, protection and response. Effective partnerships can resolve community challenges in hazardous Wildland-Urban Interface areas. The benefits of partnerships include the sharing of ideas, expertise, and knowledge, as well as the sharing of fire protection responsibilities.

#### 12.1 Identifying the need for a FireWise Community

Veldfires are a natural feature of the African landscape. Communities exposed to veldfires may range from poor rural communities to wealthy developers. Many rural communities have a history of living with fire and may even use fire for grazing, hunting, or clearing land. The lack of basic resources, however, has placed many of these communities at risk during the annual fire season. Very often communities rely on fire brigades to protect their properties, either because this is common belief, or, because as a ratepayer, it is an expected service. We need to recognise communities are vulnerable to uncontrolled veldfire hazards.



Fire awareness billboards for high fire danger areas

It should be born in mind that communities do not function in isolation. They border on, and simultaneously impact on, neighbouring communities with a variety of different activities (such as forestry and agriculture). Very often they border on formally structured communities, who already practice active veld-fire management. Alliances can be formed with these neighbours and this can lead to the establishment of effective sustainable FireWise Communities. In ideal circumstances, communities in more developed areas will include everyone ranging from homeowners, landowners, farmers, and foresters to community workers, elected officials, and local authorities.

#### 12.2 Community involvement

Traditional and historical roles, sometimes reinforced by the media, label firefighters as "protectors" and "heroes", while the homeowner is the "helpless victim". In FireWise Communities, however, protection and prevention belongs to **everyone** in the community. A key objective of FireWise planning is to define all the responsibilities and to encourage appropriate action by various groups and individuals. When responsibilities are clearly defined and direction is provided, the mind-set of "protector" and "victim" can be redefined. Firefighters and homeowners can become partners.

Other contributions by other organisations include:

- education curricula at schools designed to offer fire safety education in selected grades;
- police and law enforcement agencies who usually offer emergency response in the event of evacuation; and
- the Water Department whose responsibility it is to plan, design, operate, and maintain water distribution systems to ensure water availability during fire suppression activities.



Community involvement



#### 12.3 The aims of a FireWise Community

The primary focus of FireWise is to create awareness of the dangers of uncontrolled fires by equipping homeowners, community leaders, planners, and developers with the knowledge about risk reduction so that they can find local solutions to veldfire safety. The protection of families, property, and the environment before a fire starts is a priority, as is the provision of an action plan for an emergency.

The FireWise Community aims to:

- · improve safety in the Wildland-Urban Interface by learning to share responsibility;
- · create and nurture local partnerships for improved decision making in communities; and
- · encourage the integration of FireWise concepts into community and disaster alleviation planning.

There is something in it for everyone, whether it's preserving lifestyle, avoiding skyrocketing public costs, increasing corporate visibility, or improving image, building customer base, or just having the confidence to know that residents are more secure.

#### 12.4 Stakeholder communication

#### Communicate! Communicate! Communicate!

Once landowners and the public have been engaged and mobilised the challenge for FPAs is sustaining this involvement. Communication needs to be regularly provided as part of building the community and FPA institutional base and can cover such matters as fire lessons, fire dangers, and new management tools. Here is an example of an FPA newsletter sent out monthly to members.

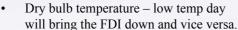
#### Dear Member,

What a great week with no fire incidents!

Last night saw some storm activity moving down from Botswana and over central South Africa, the tail ends crossing over us early last night. With the storm came some moisture (which had been predicted as of last week), but unfortunately not very widespread, and seemed to disappear as the storm moved down and over the ridge. The next few days are going to be relatively warm and with some wind around, with a very warm mid-week, no moisture is predicted for the next 10 days. No block burning will be permitted next week – still very dry.

#### **Training**

I thought it would be useful to share how the fire danger index (FDI) is calculated:





- Relative Humidity low humidity level will increase the FDI and vice versa.
- Wind speed the higher the wind speed the higher the FDI, however low temp and high humidity may keep the FDI low, but it does not mean one can burn e.g. 12deg / 50% humidity / no rainfall / 30km wind will give a relatively low Yellow FDI in essence burning would be permitted, however the wind factor will not permit burning to take place.
- Rain mm at this stage a very welcome event the more rain the lower the FDI, however, read below.
- Days since rain the amount of rain fallen will slowly be "burnt off" as a result of temperature and wind hence the higher the temp and the stronger the wind, the quicker the rainfall factor is eliminated from the FDI calculation.

#### What is happening around the world?

Canada: Worst wildfire season in decades in Canada's Northwest Territories

The wildfire season continues to get worse in Canada's Northwest Territories. Already listed as the worst season for fires in memory, it's now estimated to be costing the territorial government Canadian \$1 million (U.S. \$931,000) a day to fight the fires. "What we are seeing in the Northwest Territories this year is an indicator of what to expect with climate change," says Mike Flannigan, a professor of Wildland Fire in the University of Alberta's renewable resources department. "Expect more fires, larger fires, more intense fires". Wildfire extent is double that of the 1970s.

According to the Canadian Interagency Forest Fire Centre, there have been 31 new fires in the past 24 hours across Canada, over 2,500 so far this year and well over 2.47 million acres burned to date, early in the season. According to Flannigan, in recent years, about 8,000 fires burn about 4.9 million acres of land each year in Canada. That's about double the annual average of just 40 years ago, he says.

Canada's senior climatologist, Dave Phillips, says the southern Northwest Territories are experiencing the hottest, driest summer in some 50 years. The extremely hot dry weather in the interior and north of British Columbia is now contributing to the spread of a number of fires in that west coast province. Phillips adds the kind of weather seen this year is what global warming modelling predicted for 40 years from now.

Floods in eastern Canada: Although there are major fire concerns in the west and north, the prairies, especially Saskatchewan and Manitoba are still recovering from highly unusual major summer floods. Unusually heavy rainfall has caused abnormally high levels of flooding in several areas of Canada this year. Earlier, many parts of Quebec experienced flooding when heavy rain overcame storm sewers and caused rivers to overflow their banks.

In Canada's Maritime Provinces, many are still without power a week after tropical storm Arthur swept through uprooting trees, tearing roofs, and downing power lines.

#### REMINDER: MEMBERS FIRE EQUIPMENT - UPDATE REQUIRED

Thank you to all members who have submitted their forms – the email had hardly been sent and we had a fantastic response. Hence a reminder to other members, please complete the attached form and scan & email (admin@lionsriverfpa.co.za) or fax (086 551 5828) back to Pat. We are busy updating the GIS database and need to understand what equipment members have on farms. Your attention is drawn to the guidelines as contained in the rules & regulations of the LRFPA, in this regard. No equipment = non-compliance. No form returned means no equipment!

96 FYNBOSFIRE ®

# CHAPTER THIRTEEN RISK ASSESSMENT





#### 13 RISK ASSESSMENT

The concept of risk management underpins all decisions in fire management. It involves identifying fire risks and balancing the likelihood of a wildfire against the consequences should one occur. For example, while an event like a fire may be unlikely to happen, its consequences can be major or even catastrophic. Consequently, plans are needed to minimise risk. When planning fire management, it is important to think about economic, environmental, and social risks (risks to people). The impact of both fire prevention activities and fire itself can affect safety, the environment and the long-term sustainability of the livelihoods derived from a property.



Fuel loads are a fire hazard and should be cleared off a landowner's property

A number of factors impact on an assessment of fire risks including:

- · weather, climate change, and fire-related trends;
- veld type, veld age, and fuel types
- · fire history and burn scars; and
- · urban edge activities.

Using a combination of these factors, South Africa has developed a fire risk map. The National Veldfire Risk Assessment can be downloaded from: www.daff.gov.za following the sequence of tabs Branches > Forestry & Natural Resources Management > Forestry Regulation & Oversight, Fire Management. Navigate to **Maps** for the revised (March 2010) map of veldfire risk.

#### 13.1 Weather, climate change, and fire trends

Climate change is an alteration of the earth's general weather conditions. The most prominent change is the rising temperature of the earth's surface. It includes changes in rainfall patterns and changes in extreme weather events that lead to natural disasters such as flooding.

The most recent assessment of climate change in South Africa revealed some interesting information.

- Rainfall varies between years and, in any one year, varies throughout the year, especially in the arid
  west and northwest.
- The minimum and maximum temperatures during the year are consistently warming over most of the sub-continent.
- The number of extreme hot days and nights is increasing yearly.
- The warming trends are strongest in the western interior, western and southern coastal areas (i.e. the Fynbos Biome), and weakest over the central interior.
- The number of days when the fire danger was considered high, very high, or extreme are projected to increase to more than twenty per year for most of the interior of the Fynbos Biome, and between ten and twenty days for a narrow coastal strip along the Southern Cape coast.
- While there has been an increase in surface wind speeds in South Africa's southern coastal regions, evaporation and wind speeds have both declined significantly in the Western Cape.
- There have been significant increases in daily rainfall intensity and dry spell duration over the southern African region.
- Increases in precipitation in the southwest of South Africa, and significant decreases in the northeast.

The magnitude of the projected changes in climate will depend on the future emissions of greenhouse gases. If there is little change in emissions in future, daily temperatures will increase by  $3-4^{\circ}\text{C}$  along the coast and  $6-7^{\circ}\text{C}$  in the interior. Rainfall is likely to decrease in the western parts of the country, particularly the western coastal region. These changes are expected to have significant impacts on natural ecosystems and on fire regimes.

#### FAQ: What are the trends with wildfires in the Fynbos Biome?

Below is some of the information gleaned from an analysis of the combined fire records kept by Cape Nature and SANParks for the Outeniqua-Tsitsikamma for the period between January 1978 and December 2012.

- There were 3 261 fires.
- A total of 2 885 991 ha was burnt.
- Fifty-two fires (1.6% of all fires) accounted for 33% of the area burnt and each of them was greater than 10 000 ha.
- Most fires occurred between December and March, with December having the highest incidence. One large fire was recorded in June in the southern Cape and no large fires occurred between July and September.
- There were particular years when clusters of fires occurred over a short period (days to weeks).
   Although not continuous and often spread across the biome, these fires collectively burnt considerable areas.
- The area burnt in each "fire year" (where a fire year begins in November and ends in October the next calendar year) varied widely with the largest area burnt being 210 000 ha in 1999 when there were large fires in both the Western and Southern Cape (Figure 1). High fire years are sometimes followed by years with a lower total burnt area, probably because large areas were too young to burn for at least three to five years.
- There is no evidence that the total area burnt per year is increasing but there is evidence that the fires are recurring more frequently in areas with more human activities.
- Lightning is an important cause of fires and a single weather system, or series of systems, can result in lightning fires spread across the biome.

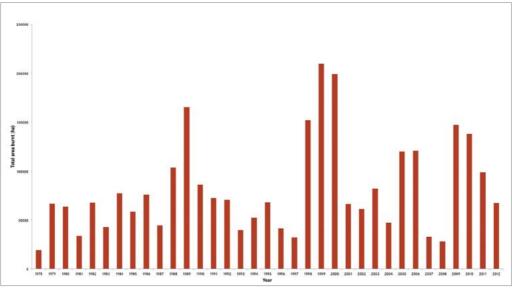


Figure 1: Areas burnt by fire year (all fires are counted as falling in the second year, thus 1978 runs from November 1977 to October 1978)

#### 13.2 Veld types, veld age, and fuel types

Fires in fynbos differ from those in grasslands. In fynbos, it takes a few years after one fire has burnt for enough fuel to accumulate to sustain another fire under typical fire conditions. However, different kinds of fynbos accumulate fuels at different rates, with the result that some fast-growing fynbos species are able to burn again before other, slow-maturing plant species in the area have accumulated sufficient seeds for successful regeneration. It also means that, under the same conditions, some kinds of fynbos have more intense fires than others of the same age.

While some fynbos vegetation types differ in this way, there are different fynbos vegetation types that have similarities in their speed of re-growth and canopy cover. They have similar characteristics and, as a result, can be grouped together as a single "fuel type".



Risk mapping

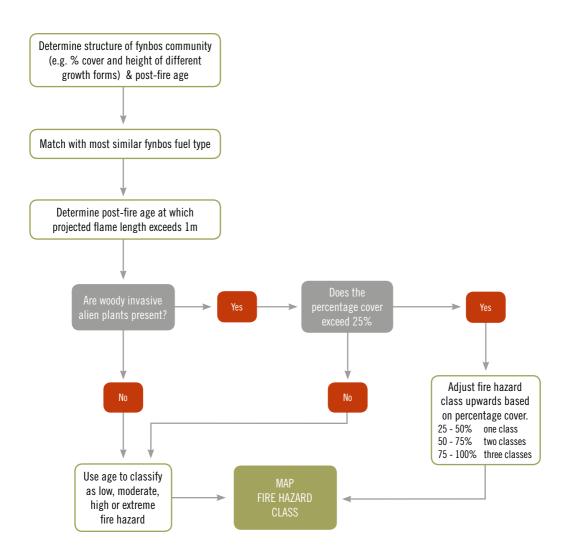
#### 13.3 How to map fire hazards

The Behavioural Education for Human, Animal, Vegetation and Ecosystem (BEHAVE) modelling system has been used to project fire behaviour for different fuel types. It does this by using information on the amounts of fine (e.g. restios), medium (e.g. twigs) and coarse (e.g. protea stems) fuels, veld age and standard summer-fire conditions. Fire experts stated that the threshold for safe, manual fire fighting is a projected flame length of 1m (Figure 2) so the post-fire age at which the flame length will exceed 1m has been set for each fuel type. The younger the age at which the fuel-type exceeds the 1m thresholds, the greater the fire hazard it presents. Invasive alien plant species also generally increase fuel loads and fire intensities. This is in proportion to their density. Where there is less than 25% coverage, the invasive alien species have little or no impact on fire danger (Figure 2). However, it increases exponentially beyond this. This information is used to produce a map highlighting the areas with the fuel types which pass the threshold at the youngest age or are densely invaded.

This is a surrogate for a map showing fire hazard based on the known post-fire age, but is a practical alternative where the post-fire age is not known for most of the area of interest.

Where the densities and dominant alien species are known, the information can be used to increase the fire hazard rating in proportion to the density.

### FIGURE 2: PROCEDURES FOR DETERMINING THE FIRE HAZARD CLASS FOR FYNBOS VEGETATION TYPES, AND ADJUSTING IT FOR THE IMPACT OF INVASIONS ON FIRE BEHAVIOUR



#### 13.4 Fire history and burn scars



Burn scars can be observed with the eye

Data on the areas burnt between different dates can be obtained from remote sensing and is called the "burnt area" data. This information is essential for building up a sound and reliable record of fires in an area. Data on actual fires can be used to improve and provide information on causes, sizes, return intervals of fire, and other factors that can be used to guide and improve fire management. Data on the occurrence of fires and burnt areas can be obtained from remote sensing but the best data comes from accurate ground-based mapping. Remote sensing of burnt areas in fynbos is still not accurate enough for analyses of fire histories or sizes, but it can be useful where there are no other sources of data.

Basic data required to gain a sound understanding of the main elements of the fynbos fire regime and to identify management interventions or responses.

Element of the fire regime	Data required
Frequency	Start and end dates and a unique fire identifier (code) when combined with a map of a fire, the overlaps between successive fires can be used to calculate the return intervals and whether or not this exceeds the threshold for ecological acceptability.
Season	Start and end dates can be used to determine the proportions of the fires occurring each season and whether or not this is ecologically acceptable.
Intensity	Difficult and impractical to measure in the field but can be estimated from observations and from information on fuel loads, spread rates, and weather conditions during the fire. Important for understanding the impact of the fire on soils, soil-stored seeds, their survival and germination, and plant recruitment.
Severity	Difficult and impractical to measure in the field. A measure of the intensity and the time period that the fire burned at a spot can be inferred from the state of the soils, sizes of un-burnt or partly burnt material. Same ecological value as the intensity.
Cause	Identifies the source and type of ignition. Can be used to understand the human role in fires and to identify trends, which need management interventions, and can be used to educate people about the importance of being firewise.
Size	Based on maps of the fire from ground-based mapping, aerial photographs or satellite images. Essential for determining fire recurrence intervals and improving understanding of fire behaviour and dynamics.
Point of ignition	Essential for improving mapping of fire hazard or ignition risk and for planning management interventions and taking legal action.

#### 13.5 Urban edge activities

The Wildland-Urban Interface (WUI) is the area where people and their assets are exposed to harm from wildland fires. A sequence of steps to follow in determining the risk associated with a wildfire occurring on the WUI is shown below. The fire risk comprises two parts. The first is an assessment of the fuel loads and what kind of a fire they could sustain, and the second assesses the potential consequences of that fire in terms of possible harm to people and property exposed to such a fire.

### STEPS TO FOLLOW WHEN DELINEATING THE WILDLAND-URBAN INTERFACE AND ASSESSING THE HAZARDS AND RISKS ALONG IT

- 1 DELINEATE THE WUI
- 2 CREATE A BUFFER ON EITHER SIDE OF WUI (E.G. 100M)
- 3 CHARACTERISE THE ASSETS FOUND ALONG THE WUI
- 4 DESCRIBE THE FUEL TYPES FOUND ALONG WUI
- 5 CREATE PAIR ZONES CONTAINING SIMILAR HAZARDS (WILDLAND FUELS) AND ASSETS (BUILDINGS)

- 6 ASSESS THE LIKELIHOOD OF A WILDFIRE OCCURRING IN EACH WILDLAND ZONE
- 7 ASSESS THE CONSEQUENCES OF A WILDFIRE IN EACH URBAN ZONE
- 8 ASSIGN RISK RATINGS TO EACH SIMILAR PAIRED ZONE
- 9 MAP THE RISKS
- 10 ASSESS THE IDENTIFIED RISKS ANNUALLY BEFORE EACH FIRE SEASON



People living on the WUI are exposed to damaging wildfire



Homeowners should identify and assess risks before each fire season

#### **Determine priorities for intervention**

Data and statistics from the risk assessment must be used to identify the various fire risks. These considerations can then be used to establish the priority issues to address. Priorities can be established by identifying specific issues.

- Impact of the fire risk on the community in terms of life, injury, property damage and other economic or environmental impacts. This can be measured in terms of people injured, or the cost of fires.
- Frequency of the problem, or how often it occurs.
- Likelihood of the problem getting worse without intervention.
- Existing community programmes that successfully address the fire risks.
- The trend of the problem is there an indication the fire risk is getting worse over time.
- The mission and the goals of the organisation. (There may be some fire problems that are clearly outside the scope of the organisation.)

The FPA manager should pose each consideration in terms of specific questions.

- What is the impact of the problem on the community?
- What is the frequency of the problem?
- · Is the problem getting worse or better?
- What is the likelihood the problem will get worse without an educational programme?
- What other programmes are targeting the problem?

Decision makers must review the considerations and establish the priorities based upon their judgment. This, at times, is difficult.

The fire risks should be categorised as a high, moderate, or low priority. High-priority risks should be addressed immediately. Moderate-priority risks are less urgent and can be attended to next. Low-priority risks should only be addressed once high and moderate priorities have been dealt with.



# CHAPTER FOURTEEN PREVENTION, PROTECTION, AND PLANNING





# 14 PREVENTION, PROTECTION, AND PLANNING

Preventing unwanted damaging fires is always less costly than suppressing them. In addition, prevention programmes raise awareness around wildfires and help mobilise landowners to get involved in their FPAs.

## 14.1 Implementing Wildland Fire Awareness Programmes

In South Africa, wildland fire awareness education has progressed significantly over the past 15 years with the UKUVUKA campaign in 2000, the FireWise Communities programme in 2005, and most recently the Fire & Rescue Service's "Fire is Everyone's Fight" campaign initiated in 2015.

The concept of proactively educating a high-risk community on how to prevent harmful fires and how to survive them has been expanded to include an "All Hazard" approach. Fire safety engineering, enforcement, and educational interventions that reduce fire risk work very well when applied simultaneously as part of an overall IFM strategy. This "synergistic" effect enhances fire risk reduction and is an important reason why community education must be a priority within any FPA mission.

# 14.2 What is Community Risk Reduction?

Community education, also known as public education or fire and life safety education, is part of an overall process called Community Risk Reduction (CRR). Community Risk Reduction uses prevention processes to reduce or eliminate hazards and risks in the community, thus reducing the frequency and severity of fires, injuries, and property loss.

The first step in the CRR process is methodical planning (see diagram 1). However, the foundation for long-term success is laid long before the planning step is begun. To ensure long-term success the most appropriate individuals must be made responsible for the process. In addition to this, there must be strong personal and organisational commitment to making the programme achieve its goals and objectives. The overall organisational attitude about the community education programme is the area where the seeds of success are sown.

The organisational leadership must understand, first, that community education can effectively reduce the risk of fires when used as part of an overall prevention strategy; second, that it takes months and years for community education initiatives to be effective, thus requiring a long-term investment on the part of the organisation; and third, any community education effort must be completed in partnership with other community organisations.

#### COMMUNITY RISK REDUCTION - 5 STEP PLANNING PROCESS



# **Veldfire Risk and Hazard Assessment Form (South Africa)**

(Assign a value to the appropriate element, and add all points to determine risk assessment)

Element	Points	Score
A. Means of Access		
1. Entry & exit roads: Two or more roads in/out or one road in/out	0 - 7	
Road width: More than 6m or more than 6m but less than 7m or less than 6m	0 - 2 - 4	
3. All-season road condition		
a. Surfaced road, camber grade less than 5% or greater then 5%	0 - 2	
b. Gravel, camber grade less than 5% or gravel, camber grade greater than 5%	2 - 5	
4. Municipal Fire Brigade Service Access		
a. More than 9m with turnaround or less than 9m with turnaround	0 - 2	
b. More than 9m with no turnaround or less than or equal to 9m with no turnaround	4 - 5	
<ol> <li>Road Signs: Present and reflective or present but not reflective or not present</li> </ol>	0 - 3 - 5	
B. Vegetation (Fuel Models)		
1. Characteristics of dominant vegetation within adjacent to and on property.		
a. Light (Alpine grasses, coastal fynbos)	5	
<ul> <li>Medium (short shrub and fynbos, moist savanna, gum, pine and wattle plantation)</li> </ul>	10	
<ul> <li>Heavy (tall grass, mature mountain fynbos, dense woody alien plant invaders)</li> </ul>	20	
2. Defensible space: More than 30m of adapted vegetation from the property - 22m to 30m - 9 m to 21m	1 - 3 - 10 - 25	
C. Dominant Topography within 90 m of structure/s		
1. Slope less than 10° or 10° to 20° or 21° to 30° or 31° to 40° or greater than 40°	1 - 4 - 7 - 10	
D. Additional Rating Factors (rate all that apply)		
Topographical features that negatively affect veldfire behaviour i.e. hot and dry northern slope aspects, gullies, kloofs	0 - 5	
2. Sources of possible ignition that occur within the area assessed.  Rate severity on a scale of 1 to 5: frequent lightning - railways - mountain passes - power lines - picnic and camping sites	0 - 5	
3. Areas that are periodically exposed to unusually severe fire weather and strong dry winds	0 - 5	
4. Neighbour boundary density factor, or potential sources of accidental ignition (add number of properties or neighbours per km). Less than 1 per km or 2 - 4 per km; 5 - 7 per km; 7 - 10 per km or More than 10 per km.	0 - 5	

Element	Points	Score
E. Dominant Roofing Type		
Tin roof or slate or tile roof or asbestos roof or thatch	0 - 3 - 15 - 25	
F. Dominant Building Construction Type		
Materials (dominant): Non-combustible/fire resistive walls, eaves & deck (stoep) - non-combustible/fire resistive wall, combustible deck (stoep) - combustible wall and deck (stoep)	0 - 5 - 10	
Building distance from the nearest slopes of 30% or more: More than     9.1m to slope - less than 9.1m to slope	1 - 5	
G. Available Fire Protection		
Water source availability: Pressurized water source availability - stand alone pump non-pressurized water source - no water	0 - 1 - 2 - 3 - 5 - 10	
2. Organised response resources: Station is less than 8 km from structure or station is more than 8 km from structure	1 - 3	
Fire Detection Facility Camera monitored 24 hour or manned lookout or alternative plan or satellite or none	1 - 2 - 4 - 6 -10	
H. Membership of Fire Protection Association/ Firewise community		
Yes (0) or No (20)	0/20	
I. Safety Zone		
Does the community have a safety zone?	0	
Total		

#### HAZARD ASSESSMENT

Total Points: LESS THAN 40 ➤

BETWEEN 40 AND 64 ➤

BETWEEN 65 AND 109 ➤

GREATER THAN 109 ➤

**LOW HAZARD** 

MODERATE HAZARD

HIGH HAZARD

EXTREME HAZARD

# 14.3 The focus on prevention

The best way to manage a fire problem is to prevent it from happening in the first place. Prevention is much more cost-effective and will clearly reach greater numbers of people in a community. Fire risks have been drastically reduced over recent decades in many countries through the implementation of a range of evidence-based interventions using education, engineering changes, enforcement of legislative protection, and environmental modifications. This strategy has been further enabled by improved data gathering systems, new and more stringent legislation, social marketing, and advocacy. Volunteer groups have also played an important role, not only by providing much needed peer support but also through their campaigning and advocacy efforts.



Awareness material in a fire prone area

# 14.4 Using an integrated approach to fire prevention

Decades of research and experience have demonstrated that fire-risk reduction requires a comprehensive integrated approach, with a combination of community-based activities supported by a regional infrastructure (national/provincial/local). The causes of fire-related risk factors are numerous and complex, and fire-prevention strategies are by necessity multifaceted and involve all sectors and many disciplines. Therefore, an integrated approach to fire prevention is essential. Each FPA has a duty to promote and protect the population within their jurisdiction by developing and implementing measures for the prevention of fire risks.

Fire-related risk is the consequence of a number of interconnected events that, when occurring together, provide the necessary conditions in which detrimental fires are more likely to occur. The reduction of fire-related risks relies on a comprehensive understanding of broad societal and community factors, as well as more localised factors at the household and individual level. The targeting and application of interventions at each of these levels could result in a more sustained and successful approach to fire risk reduction. This can be achieved by changing the individual (and their behaviour), the agent (person), or the environment by implementing evidence-based interventions that target vulnerable groups and their multiple environments.

## Environment **Barriers** Fire breaks Engineering Evaluation Safer design **Analysis** REDUCTION Fire detection Surveillance IN FIRE RISKS & PROPERTY LOSS Enforcement Education Legislation Safety promotion Fire safety FireWise inspectors MONITO

#### INTEGRATED FIRE RISK REDUCTION STRATEGY

An integrated fire-risk reduction strategy encompasses environmental modifications, engineering, education, enforcement (including legislation), and evaluation.



**ENVIRONMENTAL** modifications focus on modifying the physical environment, e.g. separating fire-prone areas with barriers such as firebreaks.



**ENGINEERING** is directed at enhancing fire safety with equipment, e.g. sprinklers and smoke detectors.



**EDUCATION** involves the provision of training and information to improve fire safety.



**ENFORCEMENT** focuses on interventions that enforce fire safety legislation.



**EVALUATION** provides information to determine fire-risk reduction priorities and which interventions work.

# 14.5 Fire prevention campaigns



Preventative measures can reduce the risk of unwanted fire

or community-wide fire-related behaviours or how to initiate and sustain the positive behaviour change that is required.

To be effective, selection of the most appropriate message must be situation-specific and depend on the specific target audience, the setting, and the characteristics of the behaviour to be changed. The understanding and application of theoretical models that will enhance the success of prevention interventions is of utmost importance.

This kind of strategy highlights the importance of combining behavioural and environmental approaches to fire prevention. Programmes using a combination of these interventions (e.g. education, engineering, enforcement) have achieved significant success in reducing community risk from fire.

Ultimately, in order to successfully reduce this risk, our interventions must include behaviour change strategies in order to establish and maintain the appropriate safety behaviour - by landowners, parents, children, decision makers, journalists, as well as firefighters.

Fire-prevention campaigns and activities often seem to be based on the assumption that simply changing people's awareness about the fire problem will change their behaviour. This is often referred to as the blanket approach, where the aim is to cover as wide an area or population as possible with the same message.

The general public are often unaware of the effectiveness of specific fire-prevention actions. This indicates the need for more effective public education regarding fire prevention. In addition, little attention is given to understanding the actual causes and influences affecting individual



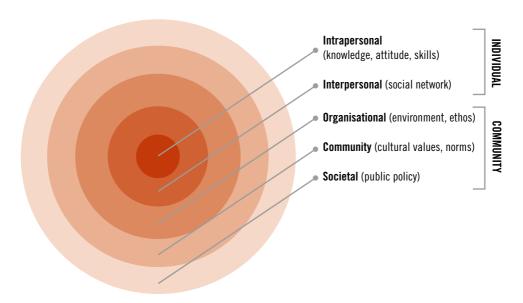
A uniform, wide spread message is proven to be more successful

# 14.6 The Systems Approach (Ecological model)

The ecological model is a useful concept to help understand the various levels within a community and how these levels are interconnected. It provides an organising framework that helps to systematically think about comprehensive approaches and the behaviour of multiple audiences. Systems thinking, which is the process of understanding how things influence one another within a whole, is central to ecological models. In this case, the system is the community.

It illustrates the dynamic interaction between behaviour and the environment (social and physical), and conveys the idea of multiple levels of influence on both individual-level and community-level factors in shaping high-risk and safety-related behaviours. In other words, the ecological model is not only beneficial in developing and implementing fire-prevention programmes, but also in identifying and understanding the fire risk factors within the population.

# THE SYSTEMS (ECOLOGICAL) VIEW OF A COMMUNITY AND THE MULTIPLE LEVELS OF INFLUENCE



## Multiple levels of influence

Within this perspective, human behaviour is viewed as being affected by, and affecting, multiple levels of influence. Behaviour both influences and is influenced by the social environment within a community. This multi-level, interactive perspective clearly shows the advantages of multi-level interventions, such as those that combine behavioural and environmental components (active and passive). Different intervention strategies and methods are available and must be integrated into an overall prevention strategy when working with individuals and communities.

Referring to the diagram, the first level is the **intrapersonal level**, which refers to the influence of an individual's knowledge, skills, attitudes, and beliefs on his or her own behaviour. Individual knowledge and skill, perception, and motivation (e.g. Maslow's hierarchy of needs), attitudes, and beliefs are relevant at this level.

Second is the **interpersonal level**, which refers to how people such as family members, friends, peers, co-workers, and significant others can influence the individual's behaviour. The social networks of the individual are an important influence at this level.

Often the intra and interpersonal levels are simply designated the "individual level." Interventions at this level could include activities incorporating educational programmes, training, counselling, skills development, and door-to-door campaigns.

The next level is the **organisational level**, which includes structures such as associations, institutions, workplaces, churches, pre-schools, and others that have rules and regulations that can influence individuals and groups.

The **community level** usually indicates a specific geographical area and incorporates the individuals in that area into a group that shares identity, values, norms and other societal influences. Social marketing campaigns are often used at this level.

The **societal level** represents larger systems, such as political, that have power and some level of control over communities. Other large societal influences include economic, educational, and social policies. Often policy development and implementation is used to influence change at this level.

These three levels can be viewed collectively as the community level. Interventions that focus on the use of social marketing using the mass media, as well as coalition building, community development, and poverty alleviation programmes are important here.

Community Risk Reduction programmes will have a better chance of success when the problems are analysed and programmes are planned, keeping in mind the various levels of influence in the ecological model. The higher levels (community, societal) are more difficult to change, but are more likely to be sustained when changed. For example, changing laws would be more difficult than changing an individual's knowledge, but when that law is enforced effectively over time, sustained behaviour change can occur.

# 14.7 IFM annual planning

The different components of Integrated Fire Management are interwoven and relevant throughout the year. However, the level of attention to each or the activities will vary according to the seasons and fire propensity.

Each fire biome should develop a month-by-month plan that schedules what pre-fire season activities are needed, what in-fire season activities are needed, and what post-fire season activities are needed, and to schedule them into the calendar of activities clearly specifying which stakeholder is responsible for what. For more details on what such a plan could look like, see the Western Cape annual plan.

#### 14.7.1 IFM annual planner for the Fynbos Biome

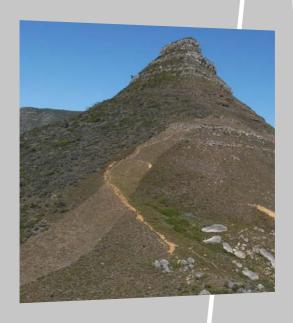
Implement winter plant control operations on re-growth  Conduct pre-fire season self-assessment  Submit self-assessment forms to FPA manager  Classify and map fuel load status of all parts of the land  Inspect the condition of any power lines and power-line servitudes  Inspect the condition of road verges on private and adjoining public roads  Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  Prioritise firebreaks  Schedule dates for clearing of firebreaks			
Conduct pre-fire season self-assessment  Submit self-assessment forms to FPA manager  Classify and map fuel load status of all parts of the land  Inspect the condition of any power lines and power-line servitudes  Inspect the condition of road verges on private and adjoining public roads  Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  Y  Prioritise firebreaks			
Classify and map fuel load status of all parts of the land  Inspect the condition of any power lines and power-line servitudes  Inspect the condition of road verges on private and adjoining public roads  Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  Y  Prioritise firebreaks			
Inspect the condition of any power lines and power-line servitudes  Inspect the condition of road verges on private and adjoining public roads  X  Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  X  Prioritise firebreaks			
Inspect the condition of road verges on private and adjoining public roads  X  Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  X  Prioritise firebreaks			
Review firebreak plan  Conclude bilateral landowner agreements to relocate breaks  Prioritise firebreaks			
Conclude bilateral landowner agreements to relocate breaks  X  Prioritise firebreaks  X			
Prioritise firebreaks X			
Schedule dates for clearing of firebreaks X			
Prioritise proposed fuel reduction activities on property X			
Update equipment inventory x			
Attend pre-fire season Fire Management Unit meeting x			
Consolidate information on fuel loads	х		
Discuss changes to firebreaks	х		
Consolidate pre-season fire information for submission to FPA	х		
Report on the condition of power servitudes and public road verges x			
Update FMU firebreak registers		х	
Update FMU firebreak plan		х	
Identify staff for fire management training x			
Implement fuel load reduction measures and stack burning  – with a burning permit from FPA manager			
Develop a training programme for drivers, crew leaders and proto teams		х	
Arrange dates for staff training	х	х	
Stack burning allowed if weather permits – get burning permit from FPA manager x	^		

		Landowner	FMU rep	FPA Mgr/Asst	FPO/CFO
August	Finalise firebreak agreement with neighbours	х			
gust	Train employees in fire management	х			
	Implement fuel load reduction measures with a burning permit from FPA manager	х			
	Stack burning allowed if weather permits – get burning permit from FPA manager	х			
	Brush cut firebreaks	х			
	Attend pre-fire season FPA/District Fire Working Group meeting		х	х	х
	Consolidate district level fuel load and firebreak information			х	
	Update district firebreak plan			х	
	Identify resources available to assist with firebreak establishment			х	х
	Prioritise assistance with firebreaks		х	х	х
	Draw up action plan for non-conforming firebreaks		х	х	х
	Settle deployment of FPA resources		х	х	х
	Submit any applications for firebreak exemption to DAFF			х	
(0					
September	Update contact details of all neighbours	Х			
embe	Check that water points have adequate supplies	Х			
Pr Pr	Check if all tools conform to FPA standards	Х			
	Ensure employees are trained in fire management	Х			
	Consolidate contact details and settle after hours call out procedures with employees	Х			
	Ensure firefighters have appropriate protective clothing	Х			
	Implement action plan for firebreak preparation	Х			
	Check insurance cover	Х			
	Understand the obligations of your insurance warranties	Х			
	Understand the legal implications concerning landowner liability	Х			
	Stack burning allowed if weather permits – get burning permit from FPA manager	Х			
	Brush cut firebreaks	Х			
	Attend FMU meeting	Х			
Oct	Settle FPA response plan			х	х
ctober	No stack burning without a permit from FPO		х	х	
er	Check all radios	Х			
	Brush cut firebreaks	Х			
	Brush cut roads bordering open areas and firebreaks	х			
	Ensure Eskom servitudes are cleared	х	х	х	
	Match your fire-fighting resources based on the fire risks identified	Х			
	Obtain standby rosters from your neighbours	Х			
	Obtain local FPA standard operating procedures related to high FDI periods	Х			
	Controlled burn of open areas on rotational burning programmes with CFO permit	Х		х	х
	Train your employees in fire management	х			
	Implement procedures to ensure the availability and supply of fuel, rations, etc., as and when required	х		х	

		Landowner	FMU rep	FPA Mgr/Asst	FPO/CFO
October	Implement operational procedures to ensure quick response to provide medical, mechanical, protection, and other services	х	х		
er	Implement a weekly vehicle checklist to ensure fire readiness	х			
	Obtain rules and regulations of the local FPA and FMU	х			
	Check that water points have adequate supplies	х			
No	TAKE EXTREME CARE WHEN BRUSH CUTTING BREAKS	х			
November	Ensure Eskom servitudes are cleared	х		х	
ber	Ensure all public road verges are cleared	х		х	
	Develop all-risk prevention plan for each risk	х			
	Ensure that all-risk action plan is fully implemented	х			
	Start using readiness checklist	х			
	Ensure all fire-related training is completed	х	х	х	х
	Activate manual lookouts, if necessary	х			
	Brush cut firebreaks around homesteads	х			
	Undertake any controlled burns on a rotational burning programme with burning permit from CFO	х	х	х	х
	Check all your fire fighting vehicles comply with FPA standards	х			
	Remind all your staff of the dangers of cooking and heating fires, smoking, etc.	х			
	Issue Personal Protective Equipment to all your fire fighting staff	х			
	Make sure that all fire staff have been for their annual medical check-up	х			
	Make sure that all staff are familiar with local FPA response plan	х			
	Check that all access roads are graded and accessible	х			
	Attend FMU meeting	х	х	х	
	Talia anyoning of any plant to growth	.,			
December	Folio spraying of any plant re-growth  Identify (mark) completed firebreaks on a map	X	.,		
mbe	Brush cut ("skoffel") final firebreaks as per your plan	X	Х		
7	Ensure Eskom servitudes are cleared	X	х	х	
	Advise all staff of call-out and dispatch protocols	X	^	^	
	Perform weekly checks of all equipment, using checklists	X			
	Perform checks to ensure readiness and quick reaction at all times	х			
	Obtain FDI forecast on a daily basis from your local FPA	х			
	Distribute your standby rosters to all neighbours	х			
Jan	NO MORE BRUSH CUTTING ALLOWED	х			
January	Folio spraying of any invasive plant regrowth	х			
	Advise all staff of call-out and dispatch protocols	х			
	Perform weekly checks of all equipment, using checklists	х			
	Obtain FDI forecast on a daily basis from your local FPA	х			
	Distribute standby rosters to all neighbours	х			
	Perform checks to ensure readiness and quick reaction at all times	х			
	Attend mid-fire season FPA/District Fire Working Group meeting		х	х	х
	Study weather systems and check forecasts on the internet	х			

		Landowner	FMU rep	FPA Mgr/Asst	FPO/CFO
Fel	NO MORE BRUSH CUTTING ALLOWED	х			
February	Advise all staff of call-out and dispatch protocols	х			
Z	Obtain FDI forecast on a daily basis from your local FPA	х			
	Perform weekly checks of all equipment, using checklists	х			
	Perform checks to ensure readiness and quick reaction at all times	х			
	Distribute your standby rosters to all neighbours	х			
	Study weather systems and check forecasts on the internet	х			
	Attend FPA Annual General Meeting to fix membership fees, etc.		х	х	х
3	NO MORE BRUSH CUTTING ALLOWED	Х			
March		х			
	Perform daily and weekly checks of all equipment, using checklists	х			
	Perform checks to ensure readiness and quick reaction at all times	х			
	Distribute your standby rosters to all neighbours	х			
	Attend FMU meeting	х	х	х	
	Study weather systems and check forecasts on the internet	х			
₽	NO MORE FIREBREAK BURNING ALLOWED	Х			
April		х			
		х			
		х			
	Distribute your standby rosters to all neighbours	х			
	Study weather systems and check forecasts on the internet	х			
7	Stack burning allowed if weather parmits get burning permit	х			
May		X			
		x			
		X	х	v	
	Perform checks to ensure readiness and quick reaction at all times Distribute your standby rosters to all neighbours Study weather systems and check forecasts on the internet Attend FPA Annual General Meeting to fix membership fees, etc.  NO MORE BRUSH CUTTING ALLOWED Obtain FDI forecast on a daily basis from your local FPA Perform daily and weekly checks of all equipment, using checklists Perform checks to ensure readiness and quick reaction at all times Distribute your standby rosters to all neighbours Attend FMU meeting Study weather systems and check forecasts on the internet  NO MORE FIREBREAK BURNING ALLOWED Obtain FDI forecast on a daily basis from your local FPA Perform daily and weekly checks of all equipment, using checklists Perform checks to ensure readiness and quick reaction at all times Distribute your standby rosters to all neighbours Study weather systems and check forecasts on the internet  Stack burning allowed if weather permits – get burning permit Keep monitoring FDI Study weather systems and check forecasts on the internet Attend FMU meeting Implement winter plant control operations on re-growth Attend FPA/District Fire Working Group post fire season meeting  Stack burning allowed if weather permits – get burning permit from FPA Implement winter plant control operations on re-growth		X	Х	
		Х	х	х	х
	Account 17 A) District the working Group post the season theeting		^	*	^
June	Stack burning allowed if weather permits – get burning permit from FPA	х			
Ü	Implement winter plant control operations on re-growth	х			
	Start to plan for the next fire season	х			

# CHAPTER FIFTEEN FIREBREAKS





# 15 FIREBREAKS

## 15.1 Are landowners legally obliged to create firebreaks?

Section 12(1) of the National Veld and Forest Fire Act provides that:

"Every owner on whose land a veldfire may start or burn or from whose land it may spread must prepare and maintain a firebreak on his or her side of the boundary between his or her land and any adjoining land."

Section 13 provides further that:

An owner who is obliged to prepare and maintain a firebreak must ensure that, with due regard to the weather, climate, terrain and vegetation of the area:

- it is wide enough and long enough to have a reasonable chance of preventing a veldfire from spreading to or from neighbouring land;
- · it does not cause soil erosion; and
- it is reasonably free of inflammable material capable of carrying a veldfire across it.

In addition to the statutory duty to create a firebreak established by the NVFFA, landowners have a common-law duty to conduct themselves in such a way that they do not cause harm to others. Part of this duty, it is argued, requires landowners to reduce the fuel loads on their properties to reasonable levels and another part, regardless of the provisions of any legislation, is that they take reasonable measures to prevent the spread of wildfires to adjoining properties.

# 15.2 What is the purpose of a firebreak?

Within the Fynbos Biome where wind-driven fires can spot up to a kilometre ahead of the fire line, it would appear that the principle purpose of a firebreak is:

- to provide an area of reduced fuel load which will reduce the intensity of a fire and therefore allow for more effective combatting; and
- to then also serve as a line from which a back burn can be started.



Cutting firebreaks in a plantation



Extending the width of firebreaks by burning road verges

## 15.3 Where should firebreaks be located?

In deciding where a firebreak is to be located, the point of departure is Section 12(1) of the National Veld and Forest Fire Act, which requires that it be located on the boundary between landowners. However, if a firebreak is to serve as a point for fire control, the location of the break needs to be dictated by fire management considerations and not by the linear location of property boundaries. In addition, in order to ensure that available resources are allocated in the optimal fashion, the rationalisation of firebreaks helps to reduce costs.

Section 11(7) allows for such rationalisation by providing as follows:

a. "Owners of adjoining land may agree to position a common firebreak away from the boundary."



The Minister does not need to approve such an agreement between two owners to reposition a firebreak. However, it is recommended that:

- a) landowners collectively sign an agreement containing a plan of the revised firebreak;
- b) landowners inform their FPAs of any proposed realignment of firebreaks; and
- c) if possible, the FPA approves the realignment as part of its Integrated Fire Management plan.

Section 15 further allows the Minister to grant landowners exemptions from the duty to prepare and maintain firebreaks by providing as follows:

- " (1) The Minister may exempt any owner or group of owners from the duty to prepare and maintain a firebreak or firebreaks for good reason.
  - (2) The exemption may be subject to conditions.
  - (3) The Minister must consult the fire protection association for the area, if any, before Section granting any exemption".
- The Firebreak Exemption Application Form for individual or groups can be submitted to the Minister the implement this provision.

# 15.4 What is the procedure for optimal firebreak planning?

Pre-season fire planning should:

- · identify the Wildland-Urban Interface;
- identify the areas of highest risk;
- identify the optimal location of firebreaks;
- prepare a map of the proposed firebreak locations;
- prioritise establishment and maintenance of the different firebreaks; and
- members of the FPAs should then conclude a multi-party agreement adopting the firebreak plan.

# FAQ: Should landowners who have agreed to realign their firebreaks apply for exemptions from the Minister?

Generally, it is incumbent on landowners to both comply with the requirements of the statutes that regulate the management of wildfires and to also ensure that they do not act negligently. Landowners who engage in Integrated Fire Management, which includes the planning of firebreaks, particularly if it is done in conjunction with an FPA, and who then proceed to implement that plan, are taking a significant step towards ensuring that they protect themselves against subsequent civil claims.

An agreement between different landowners that approves the relocation of firebreaks will not only limit civil claims between these landowners but will also further support an argument that the landowner acted reasonably in the circumstances.

Getting the Minister to grant an exemption will not insulate a landowner from allegations of negligence. However, it will counter any argument that the landowner did not comply with a statutory duty created by the Act.

# 15.5 What is the approximate costing of a firebreak?

The following table sets out a guideline of costs for firebreak establishment and maintenance within the Fynbos Biome (as at 2014).

Veld age	Cost/m²
0-5 yrs.	R1.20
6 -11 yrs.	R1.80
12+	R2.50
Thick bush	R3.00
Average belt width	15 meters
Circum-peninsula belt maintained annually: R1.5m - 130kms@20m/15m	R0.58/0.76

#### 15.6 Who determines how broad a firebreak should be?

The law does not specify the size of a firebreak or the best way of creating them as conditions vary greatly across the country.

- Many of the FPAs have developed *firebreak guidelines* to assist members to create appropriate firebreaks. The guidelines are based on the following considerations:
- providing for vehicle access, based on the type of vehicle needed in the terrain;
- · the nature of the vegetation in which they occur; and
- the type of fire suppression activities that can be managed from the firebreak.

## 15.7 What does "maintaining a firebreak" mean?

According to the NVFFA a firebreak has to be "reasonably free of flammable material capable of carrying a veldfire across it". If the firebreak becomes overgrown, it is no longer an effective firebreak. This means that the firebreak has to be regularly cleared in order to prevent a wildfire from spreading. FPAs may set rules with regard to establishing firebreaks and state that the firebreak must either be burnt or cleared sufficiently to ensure flammable material is at its absolute minimum.

# 15.8 What happens if a landowner fails to create appropriate firebreaks?

The first step is to try to resolve the matter cordially between neighbours.

- If the landowner is a member of an FPA, the second step is to inform the FPA who may decide on an appropriate sanction, which may include suspension of FPA membership.
- If all else fails, the landowner can be reported and in terms of the NVFFA penalised. Such enforcement is the responsibility of Fire Protection Officer complying with Section 26 of the NVFFA.

The NVFFA provides expressly as follows:

1. "25(3) Failure to [create a break] is a criminal offence".

The penalty for failing to create a firebreak is either a fine or imprisonment.

# 15.9 Are you required to cut firebreaks through indigenous vegetation?

Legally, yes. Landowners are obliged to create firebreaks regardless of the land use. The environmental losses will need to be weighed up against the costs of a court case and claim against the landowner in the event of a runaway wildfire onto their neighbours' land.

In some instances, indigenous vegetation can be incorporated as a natural firebreak or as a buffer zone in a fire management plan, which is submitted to the Minister for approval. In addition, it is possible to either realign a break by agreement or apply for an exemption as detailed above in order to avoid indigenous vegetation, if appropriate.

# 15.10 Fuel load management

Many ecosystems are prone to fires and have adapted to them, and fires are necessary to maintain the health of these ecosystems. However, fires also pose a threat to human life, infrastructure and livestock. This is especially true of areas where significant development has taken place within or adjacent to such fire-prone ecosystems. The management of fires in these areas is often characterised by both uncertainty and conflict, particularly as the conservation of biodiversity and the maintenance of ecosystem health typically requires the judicious use of fire, often by means of prescribed burning.

Managing fuel loads is an integral part of managing wildfire risk. The nature of the risk will be dependent on the different fuel types and the age of the vegetation. Reducing fuel loads may be desirable in terms of reducing immediate wildfire risk but it may have other harmful impacts, particularly in the damage it can cause to ecological systems. Wildfires happening too frequently may result in species loss, habitat loss, and adverse impacts on water sources and sponges. This can affect ecological functioning, which can then in turn impact on human health and well being, and economic production. In the circumstances, it is necessary to manage fuel loads to limit the impact of harmful wildfires.

# 15.10.1 Is there any legislation that compels landowners to reduce fuel loads?

The NVFFA does not create a specific provision requiring landowners to reduce existing fuel load on their land although it might be possible to argue that the duty that exists on a landowner to prevent a fire from spreading from their land includes a duty to remove excessive fuel that will encourage that spread.

Invasive alien plant species generally increase fuel loads and fire intensities, and this will be in proportion to their density. The Conservation of Agricultural Resources Act (Act No 43 of 1983) (CARA) was promulgated to provide for control over the utilisation of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources, and the vegetation, and the combating of weeds and invader plants.

Many of the invasive plant species that adversely affect fire management are listed in terms of Regulations 15 and 16 of the Conservation of Agricultural Resources Act of 1983 as species that need to be removed or actively controlled. The failure to do so is a criminal offence.

Some local authorities invoke nuisance by-laws in order to compel landowners to reduce fuel loads.

To view the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) Alien and Invasive Species Regulations, 2014 – Page No.3, No. 37885 online, visit www.gpwonline.co.za. It can be argued that in terms of the common law, landowners have a duty of care that requires them to remove fuel loads that create an unreasonable fire risk, and that can lead to foreseeable damage should it burn.

In addition, most FPA rules require of landowners that they comply with the risk mitigation measures contained in the FPA's fire management plan. Failure to do so can result in suspension of membership.

Offending landowners should be notified in writing of their legal responsibilities and the possible consequences for their failure to discharge them.

#### 15.10.2 How are fuel loads reduced?



Prescribed burning is common practise that reduces fuel loads over wide spread areas

Having identified fire hazards that exist within a particular area, the areas of greatest risk and the areas where management of fuel loads is to be prioritised, Integrated Fire Management needs to identify the means by which this is to be done. The primary methods are:

- · mechanical means; and
- · prescribed burning.

As far as mechanical means of fuel load reduction in wildfire prone areas are concerned, the national government, through the Department of Environmental Affairs, has embarked on a number of programmes.

- The Working on Fire Programme in terms of which
  the Department, pursuant to a public tender process,
  has contracted a single private entity to implement a national wildfire management programme that
  incorporates certain aspects of fuel reduction. Increasingly this is being driven through the FPAs.
- The Landowner Incentive Programme, which involves a number of non-governmental organisations
  acting as the implementing agents for the Department to engage with private landowners to embark
  on natural resource management initiatives, including fuel reduction measures. Increasingly this is
  being done through co-funding from the landowners.

Both these programmes focus on labour-intensive interventions that form part of the government's broader job creation programme.



#### Pre-season fire planning involves a number of checks.

- 1. Identify the different plant types, fuel types, and fuel age.
- 2. Identify the areas of highest risk.
- 3. Integrate fire risk into an invasive alien vegetation control programme.
- 4. Identify the methods for fuel load reduction in areas of highest risk.
- 5. Identify funding sources to assist with fuel load reduction.
- 6. Schedule a timetable for fuel load reduction activities.
- 7. Identify a programme for managing of any regrowth of plants.

# 15.12 Prescribed burning

Prescribed burns are fires that are planned to reduce fuel load. They are deliberately ignited with the intention of burning a predetermined area.

# 15.12.1 Relevant legislation

Prescribed burns must be aligned with relevant legislation and regulations. The Conservation of Agricultural Resources Act (CARA) contains provisions dealing with prevention and controlled veldfires. The National Veld and Forest Fire Act (NVFFA) provides for FPAs to develop rules for burning veld. These must not contradict the procedures set up in CARA. Any soil disturbance is subject to CARA. Owners should ensure that firebreaks are positioned and prepared in such a way as to cause the least disturbance to soil and biodiversity.

Finally, the Atmospheric Pollution Prevention Act is applied by some local authorities to smoke that is caused by management practices, such as prescribed burns.

126 FYNBOSFIRE ®

#### 15.12.2 CARA burning permit

Regulation 12 of the Conservation of Agricultural Resources Act has the following provision relating to the prevention and control of wildfires and the burning of veld, and provides as follows:

- "12. (1) Except on authority of a written permission by the executive officer, no land user shall -
  - (a) burn any veld on his farm unit; and
  - (b) utilise as grazing any veld on his farm unit that has burned." "Veld" is defined in the CARA regulations as land that is not being or has not been cultivated and on which indigenous vegetation, or other vegetation that, in the opinion of the executive officer, is or can be utilised as grazing for animals, occurs.

An application for a permission to burn in terms of section 12(1) must be:

- · made by the land user of the farm unit;
- made on a form obtainable from an extension officer for this purpose;
- · lodged at the extension office for the area within which the farm unit concerned is situated; and
- submitted at least 30 days prior to the intended date of burning.
- The following are preconditions for the issuing a burning permission in terms of CARA:
  - a. it must not be issued unless the executive officer is satisfied that the burning of veld is an accepted veld management practice in the area within which the farm unit concerned is situated, or that exceptional circumstances prevail on the farm unit concerned;
  - b. it may only be issued if the veld concerned is to be burned during periods of which particulars are available at the extension office concerned;
  - c. it is issued subject to the provisions of the Forest Act (Act 72 of 1968).

#### 15.12.3 Local authority by-laws

Most local authorities have by-laws relating to atmospheric pollution and further restricting the lighting of fires in the open, without a permit.

## 15.12.4 What is the procedure for obtaining a burning permit?

A permit to carry out a prescribed burn should be issued for a period rather than a particular day, and the decision of the particular day on which to carry out the actual burn should be determined by weather conditions.

The procedure for obtaining a burning permit differs from one district to another. The most common scenarios appear to be the following:

- The Chief Fire Officer retains the responsibility for issuing individual permits.
- The CFO grants a general authorisation to carry out prescribed burns during a particular period, subject to certain conditions, including the condition that the Fire Protection Officer must approve the day on which the burn is carried out.
- The FPO is delegated the responsibility for issuing the permits.

The actual procedure for permit applications differs from region to region.

A burning permit application for Prescribed Burning is included by way of example.

**NOTE**: Each application is customised so please check with your local authority. Further, some authorities charge a tariff for the permit. The permitting authority is required to check all prescribed burns.

A Burn Inspection Report and GIS map is included by way of example.

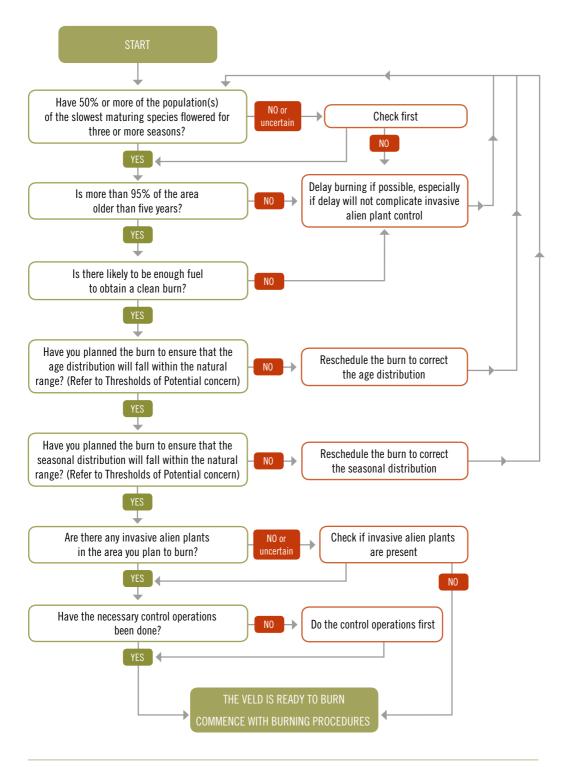
# 15.13 Who is responsible for managing a prescribed burn?

The landowner is always responsible for managing a prescribed burn and must be present at the time of the burn.

# 15.14 Decision matrix for deciding whether to undertake a prescribed burning

#### PROCEDURES FOR PRESCRIBED BURNING

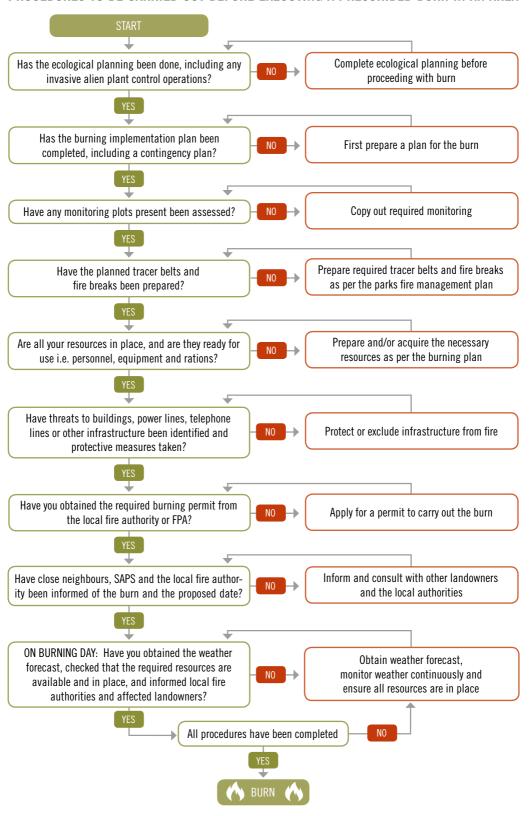
#### FLOW CHART FOR THE ECOLOGICAL CRITERIA THAT MUST BE MET FOR A PRESCRIBED BURN



128 FYNBOSFIRE

#### PROCEDURES FOR PRESCRIBED BURNING

#### PROCEDURES TO BE CARRIED OUT BEFORE EXECUTING A PRESCRIBED BURN IN AN AREA



## 15.15 Fire danger rating and early warning systems

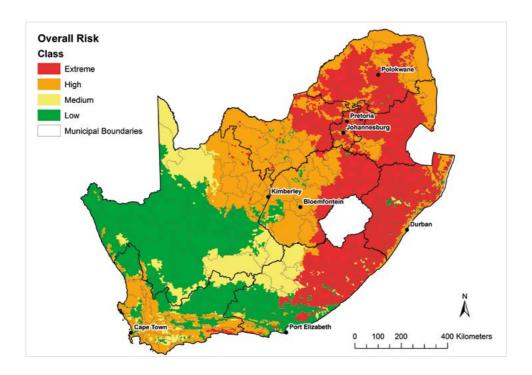
#### 15.15.1 What is the Fire Danger Rating?

Understanding the likelihood of a fire occurring and the consequential dangers is key to effective fire management and the development of an early warning system. It aims to increase the ability of the general public and of FPAs to manage wildfires by being aware of the probability of a wildfire occurring in a particular area at a specific time.

The National Veld and Forest Fire Act (Act 101 of 1998) provides for the deployment of a National Fire Danger Rating System (NFDRS). Such a system did not exist at a national level when the Act was passed although localised fire danger rating systems were used in some regions. A NFDRS was then developed.

The whole of South Africa was divided into 42 different areas - each having distinct fire conditions. Within each of these areas information about the nature of the flammable fuel is combined with the daily weather forecast to provide a projection of the fire danger. The forecast is then entered into a Fire Danger Rating table. This gives the Fire Danger Index for a particular day.

#### 15.15.2 National veldfire risk map



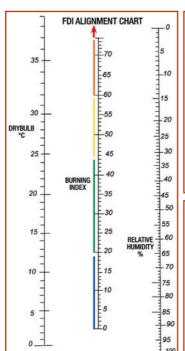
# 15.15.3 How is the Fire Danger Rating determined?

A combination of the temperature, wind direction and speed, and rainfall and humidity is used to determine the fire danger rating. This can be calculated manually or using technology.

For a manual calculation you need to:

- check the temperature outside at 10h00 and 14h00 daily;
- · measure the rainfall daily at 10h00;
- · calculate the relative humidity; and
- measure the wind speed in km/hr.

130



RAINFALL	NUMBER OF DAYS SINCE LAST RAINFALL											
mm	1	2	3	4	5	6	7-8	9 -10	11-12	13-15	16-20	
0.1-2.6	0.7	0.9										
2.7-5.2	0.6	0.8	0.9									
5.3-7.6	0.5	0.7	0.9	0.9								
7.7-10.2	0.4	0.6	0.8	0.9	0.9							
10.312.8	0.4	0.6	0.7	0.8	0.9	0.9						
12.9-15.3	0.3	0.5	0.7	0.8	0.8	0.9	1.0					
15.4-20.5	0.2	0.5	0.6	0.7	0.8	0.8	0.9					
20.6-25.5	0.2	0.4	0.5	0.7	0.7	0.8	0.9	1.0				
25.6-38.4	0.1	0.3	0.4	0.6	0.6	0.7	0.8	0.9	1.9			
38.5-51.1	0.1	0.2	0.4	0.5	0.5	0.6	0.7	0.8	0.9			
51.2-63.8	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.7	0.8	0.9		
63.9-76.5	0.1	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.9	
76.6+	0.1	0.1	0.1	0.2	0.4	0.5	0.6	0.6	0.7	0.8	0.9	

Wind Speed	Correction Factor	Wind Speed	Correction Factor	Wind Speed	Correction Factor	Wind Speed	Correction Factor
)	0	12	10	24	15	36	26
1	0	13	10	25	16	37	29
2	4	14	10	26	19	38	30
3	5	15	10	27	20	39	30
4	5	16	11	28	20	40	30
5	6	17	14	29	20	41	31
6	9	18	15	30	20	42	34
7	10	19	15	31	20	43	35
3	10	20	15	32	21	44	35
9	10	21	15	33	24	45	36
10	10	22	15	34	25	46	40
11	10	23	15	35	25	47	40

Using the FDI Alignment Chart, place a ruler between the temperature and the humidity readings.

This will give you the **burning index**.

Add a wind correction factor using the Wind Factor wind correction table.

This gives you the Fire Danger Index (FDI) if there is no rain.

If there is rain then you need to correct this with the *FDI Rainfall correction table*. This adjusts the index based on the number of days since the last rainfall - the longer the number of days, the higher the danger.

## 15.15.4 What is the Fire Danger Rating Table?

The Fire Danger Rating Table is colour coded. The table classifies fire danger into five categories below and provides an overview of the prevention and preparedness measures needed.

FDI Description	Colour		Lowveld FDI Precaution
SAFE	BLUE	0 - 20	Low fire hazard. Controlled burn operations can normally be executed with a reasonable degree of safety.
MODERATE	GREEN	21 - 45	Although controlled burning operations can be executed without creating a fire hazard, care must be taken when burning on exposed, dry slopes. Keep constant watch for unexpected wind speed and direction changes.
DANGEROUS	YELLOW		Controlled burning not recommended when fire danger index exceeds 45. Aircraft should be called in at early stages of a fire.
VERY DANGEROUS	ORANGE	61 - 75	No controlled burning of any nature should take place. Careful note should be taken of any sign of smoke anywhere, especially on the upwind side of any plantation. Any fire should be attacked with maximum force at hand, including all aircraft at the time.
EXTREMELY DANGEROUS	RED	75<	All personnel and equipment should be removed from the field. Fire teams, labour and equipment placed on full standby. At first sign of smoke, every possible measure should be taken to bring the fire under control in the shortest possible time. All available aircraft should be called for without delay.

## 15.15.5 How is the Fire Danger Index normally communicated?

The Fire Danger Ratings are normally communicated to Fire Protection Associations and to Chief Fire Officers. Warnings of possible wildfires may be communicated by local weather offices or disaster management centres. In the case of high or extreme fire risk, this may also be communicated together with the weather report on radio and television.

The daily Fire Danger Index can be viewed at http://www.forestry.co.za/fire danger-index/.

It is recommended that FPAs provide a daily FDI report to members as part of their service. It is also possible to subscribe to various services providing the actual and forecast FDI by daily SMS.

# Fire Danger Index and weather forecast for the Kou-Kamma/Joubertina and Kannaland/Ladismith Districts

Forecast for Sat 6 Feb 2016	Min Temp (C)	Max Temp	Max Hum (%)	Min Hum (%)	Prob Rain %	Rain (mm)	Lowveld FDI-D	Lowveld FDI-W	
Kou-Kamma/Joubertina	12	37	90	35	0	0	66	59	
Time	Temp C	Weather		Wind Spee	ed	Wind G	ısts		
08:00	20	Clear skie	es	NNE 19 kr	m/h	0 km/h			
14:00	31	Clear skies		SE 9 km/l	า	0 km/h	0 km/h		
20:00	21	Partly cloudy		SW 9 km/h		0 km/h	0 km/h		
Forecast for Sun 7 Feb 2016	Min Temp (C)	Max Temp	Max Hum (%)	Min Hum (%)	Prob Rain %	Rain (mm)	Lowveld FDI-D	Lowveld FDI-W	
Kou-Kamma/Joubertina	16	26	90	60	0	0	51	51	
Time	Temp C	Weather		Wind Speed		Wind Gusts			
08:00	19	Clear skie	es	NNE 19 kr	NNE 19 km/h		0 km/h		
14:00	26	Clear skie	es	SSW 19 kr	m/h	0 km/h	0 km/h		
	19	Partly clo		S 9 km/h		0 km/h			

Forecast for Sat 6 Feb 2016	Min Temp (C)	Max Temp	Max Hum (%)	Min Hum (%)	Prob Rain %	Rain (mm)	Lowveld FDI-D	Lowveld FDI-W	
Kannaland/Ladismith	17	39	70	10	0	0	82	82	
Time	Temp C	Weather		Wind Spee	Wind Speed		usts		
08:00	23	Clear skie	es	NNE 9 km	/h	0 km/h	0 km/h		
14:00	36	Clear skies		SW 19 km/h		0 km/h	0 km/h		
20:00	27	Clear skies		SW 19 km/h		0 km/h	0 km/h		
Forecast for Sun 7 Feb 2016	Min Temp (C)	Max Temp	Max Hum (%)	Min Hum (%)	Prob Rain %	Rain (mm)	Lowveld FDI-D	Lowveld FDI-W	
Kannaland/Ladismith	19	27	80	45	0	0	63	63	
Time	Temp C	Weather		Wind Speed		Wind Gusts			
08:00	21	Partly clo	udy	S 9 km/h	S 9 km/h		0 km/h		
14:00	27	Partly clo	udy	SSE 19 km	n/h	0 km/h	0 km/h		
20:00	23	Cloudy		SSE 19 km	n/h	0 km/h			

132

# CHAPTER SIXTEEN DETECTION, COORDINATION, AND SUPPRESSION





# 16 DETECTION, COORDINATION, AND SUPPRESSION

#### 16.1 Fire detection

Fire detection is an important part of an effective fire management programme. It can be accomplished in a variety of ways through fire observation towers, monitoring and reporting by community members, aerial surveillance or satellite electronic detection systems.

#### 16.1.1 Manual detection systems

As stated in the section on stakeholder mobilisation, active and informed citizens are a key resource for fire detection and provide the backbone of a manual detection system. Prior to the electronic systems, FPAs and fire services relied on reports of smoke or fire from citizens. Commercially, manual detection systems used on forestry stations included lookout posts, in addition to what is observed on the ground.

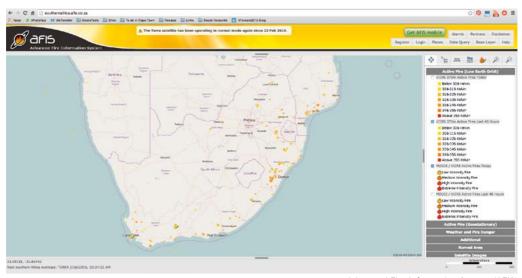
As an example, see the template Smoke Report Form.

#### 16.1.2 Electronic detection systems

Smart technology is being used to detect wildfires by South African FPAs. The system used was developed by the Council for Scientific and Industrial Research (CSIR). It offers real-time SMS alerts and email messages of fire observations made by satellite camera. The data is stored in a portal and distributed via terminals, which enable viewers to see maps of fires in real-time in any part of the country. Called the Advanced Fire Information System (AFIS).



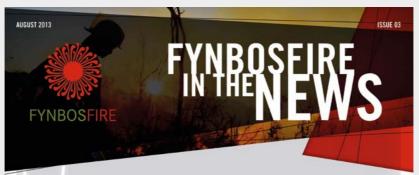
The Firehawk wildfire detection camera scans a full 360 degrees in under four minutes



Advanced Fire Information System (AFIS)



#### Using technology (AFIS) to curb runaway fires



# Space-age technology helps to curb runaway wildfire

By Jo-Anne Smetherham

S mart ways of preventing runaway wildfires from causing widespread destruction will be needed as climate change raises temperatures and creates larger tracts of tin-der-dry veld.

These smart methods already exist, and many are being used by South Africa's best Fire Pro-His "Eureka" tection Associations (FPAs).

They include the use of space age technology to detect wild-fires and the risk they will occur; controlled burns to create buffer zones that protect property and vulnerable young veld; and moves by the insurance indus-try to educate landowners and encourage them to follow best practice in fire management.

and wildfire," says Tony Mar-shall of CapeNature, whose 780 000 hectares of nature reserves flank the properties of hundreds of landowners, as well as most municipalities in the Western Cape. "However, wildfire can be managed through pre-emptive

down from satellites orbiting the earth includes data on wildfire. In 2004, remote sensing specialist Philip Frost at the Council for Scientific and Industrial Research (CSIR) began developing an information system that uld receive, process and dis-

South Africa and worldwide. At the time, Frost and his CSIR team were working with Eskom, which was experiencing large numbers of line faults due to fire. In world-first research, the scientists worked out a way of turning observations of large fires into real-time SMS alerts "There are three things that and email messages. On average, are unavoidable: death, taxes over 30 000 SMS fire alerts are sent out per fire season to FPAs and Eskom.

"The technology allows FPAs to detect fires and respond immediately, instead of having to

preparations." The data is on the Advanced The observations streaming Fire Information System web-

viewers to see maps of fires in real time in any part of the world, for any period, using Google Maps as a backdrop. Monthly estimates of the area burnt and weekly fire danger maps are also distributed to the hundreds of moute this data.

His "Eureka" moment has been a massive boost for wildire detection and prevention in South Africa and workland in South Africa and South Africa

Cape.
The CSIR forecasts of fire risk also enable fire managers to assess the best conditions for doing block burns, which create buffer zones next to valuable property, crops and plan-tations, and burn old vegetation that needs rejuvenating . "These burns are a crucial component of fire risk management and they have been happening, althoug not to the extent we would like says Marshall.

"There is a risk in doing these block burns," he says. "I'm scared wait until someone smells the smoke, which may well be too late," says Frost.

The data is on the Advanced on't do them.

These burns need to done

#### 16.2 The Incident Command System

The increased risk of fire can rapidly exceed the fire fighting capabilities of local municipalities. Without a system to coordinate and manage fire fighting resources from surrounding jurisdictions, various government departments and private agencies, the rapid spread of fire could increase beyond local coping capacities.

An Incident Command System and the sharing of resources, supported by well-trained staff with clearly defined roles and responsibilities within their statutory parameters, are key to the effective mitigation of large-scale incidents. An Incident Management System can therefore not exist in isolation and must form an integrated part of a unified framework.

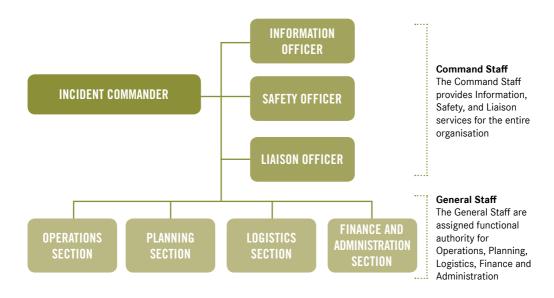
The Incident Command System (ICS) is an emergency management tool that is used in South Africa by all types and levels of emergency services, to ensure standardisation and efficiency in resolving the situation. ICS is designed to ensure optimal cooperation and communication between different organisations at any incident. To achieve this, ICS integrates facilities, equipment, personnel, procedures, and communications operations within a common organisational structure. Every ICS has a single person who has final authority on all decision-making. This works on a "first-on-scene" basis, where the first responder to an incident is the



An ICS team with clearly defined roles is used to mitigate large-scale incidents

Incident Commander (IC) until the incident has been declared resolved or the IC transfers command to someone else with more authority and/or capacity to deal with the incident. The Incident Commander can delegate tasks to individuals or an Incident Command team. This team will grow in size with the increase in size and complexity of an incident.

Fires fall under emergency services and are managed through an ICS. No two fires will be exactly the same and each fire will involve different stakeholders with different capacity and authority. However, a good incident command system will assume that many aspects of a fire fighting operation will be the same at every incident. Below is a generic ICS structure.



ICS is used by all levels of government - national, provincial, district, and local - as well as by many non-governmental organisations and the private sector. ICS is also applicable across disciplines. It is typically structured to facilitate activities in five major functional areas: Command, Operations, Planning, Logistics, and Finance & Administration.

As a system, ICS is extremely useful, providing an organisational structure for incident management and guiding the process for planning, building, and adapting that structure. Using ICS for every incident or planned event helps hone and maintain the skills needed for the large-scale incidents.

For ICS to work, each participant must be committed to working together to solve a common problem. Each responding agency will have individual objectives to carry out. In addition, the primary objectives

of each responding agency are established under the unified command concept and focus on these common response priorities, which state:

- · preserve the safety of human life;
- stabilise the situation to prevent the event from worsening;
- use all necessary containment and removal tactics in a coordinated manner to ensure a timely, effective response that minimises adverse impacts to the environment; and
- · address all three of these priorities concurrently.

For further information on the ICS system in the Western Cape, visit this link: http://www.westerncape.gov.za/eng/your\_gov/200399/pubs/public\_info/W

#### The Incident Commander

The Incident Commander is responsible for the request, use, and release of resources at an incident. Support agency resources are sought through a process that must be outlined in the FPA or municipal or Disaster Management plans. Fire services are a key support along with Working on Fire ground and aircraft services. The level of resources will depend on the incident type. Different systems exist alongside the one from the Western Cape below.

#### **TYPE**

 The incident can be handled with one or two single resources with up to six personnel.

# 5

- Command and General Staff positions (other than the Incident Commander) are not activated.
- No written Incident Action Plan (IAP) is required.
- The incident is contained within the first operational period and often within an hour to a few hours after resources arrive on scene.
- Examples include a vehicle fire, an injured person, or a police traffic stop.
- Incident Commanders are responsible for ensuring verbal IAP information is communicated to responders, safety is maintained, and incident status is tracked (using status boards, logs, recorded radio communications, incident reports, etc.).

#### **TYPE**

- Command staff and general staff functions are activated only if needed.
- Several resources are required to mitigate the incident.
- The incident is usually limited to one operational period in the control phase.
- No written Incident Action Plan (IAP) is required but an Incident Organiser will be filled in.
- Incident Commanders are responsible for ensuring verbal IAP information is communicated to responders, that safety is maintained and to ensure that the incident status is tracked (using status boards, logs, recorded radio communications, incident reports, etc.).

#### **TYPE**

 When capabilities exceed initial attack, the appropriate ICS positions should be added to match the complexity of the incident.

3

- Some or all of the Command and General Staff positions may be activated, as well as Division/Group Supervisor and/or Unit Leader level positions.
- A Type 3 Incident Management Team (IMT) or incident command organisation
  manages initial action incidents with a significant number of resources, an extended
  attack incident until containment/control is achieved, or an expanding incident until
  transition to a Type 1 or 2 team.
- The incident may extend into multiple operational periods.
- A written IAP is required for each operational period.

#### **TYPE**

2

- This type of incident extends beyond the capabilities for local control and is expected to go into multiple operational periods.
- A Type 2 incident may require the response of resources out of area, including provincial and/or national resources, to effectively manage the operations, command, and general staffing.
- Most or all of the Command and General Staff positions are filled.
- A written IAP is required for each operational period.
- · Many of the functional units are needed and staffed.
- Operations personnel normally do not exceed 200 per operational period and total incident personnel do not exceed 500 (guidelines only).

#### **TYPE**

1

- This type of incident is the most complex, requiring national resources to safely and
  effectively manage and operate.
- All Command and General Staff positions are activated.
- Operations personnel often exceed 500 per operational period and total personnel will usually exceed 1 000.
- Branches need to be established.
- Use of resource advisors at the incident base is recommended.
- There is a high impact on the local jurisdiction, requiring additional staff for office administrative and support functions.

Data needs to be collected at every incident and a record of how the incident was managed is needed in the event that there is an insurance or liability claim.

The Western Cape standardised incident command form provides a useful template for collating the required information.

The person who arrives first at the fire is the Incident Commander until the fire is put out, or a more experienced person or the Fire Brigade arrives on the scene. Once the fire has been put out and the Fire Brigade and the more experienced persons leave (to be available for other incidents), the landowner on whose land the fire was, will become the IC and monitor the area for a few days for flare-ups.

## The Safety Officer

A Command Staff position consisting of a single person who has responsibility for monitoring on-scene safety conditions and developing measures to ensure the safety of all assigned personnel. A Safety Officer may designate one or more assistants from either the same or another assisting agency or jurisdiction.

# Managing the media - Liaison Officer

In the case of mobilisation of resources from multiple stakeholders, there will also need to be a person designated to coordinate partners, freeing the IC to manage the fire. The Liaison Officer's role is to serve as the primary point of contact for assisting and coordinating activities between the IC and various agencies and groups.

# Managing the media at an incident

How incidents are communicated to the public and media are important. This requires each incident to have a public information point person who can provide information to the concerned public, the media and any other interested parties.

#### The public information function

The public has a right to know about fire and emergency incidents, what they can do to protect themselves, and what the agencies responsible for managing these events are doing to mitigate the crisis. Response agencies in the event of such major incidents need to be prepared to interact with the media at a moment's notice and to provide accurate, relevant, and potentially lifesaving information. To meet this need, a Public Information Officer (PIO) can help an organisation to convey its message, facilitate better interaction among the media, response agencies, and the public, and help put other response officials at ease when dealing with the media.

Public information is information about an incident or operation. It is generally information that the public wants to know, or may need to know as in the case of an evacuation. The role of the PIO is to provide information about an incident or operation.

The goals of public information include:

- providing effective communication between the PIO and the public via the news media;
- when possible, developing a positive public perception about the agencies involved;
- recognition of the heroes and the personnel who have done the work; and
- dissemination of important fire and life safety messages.

It is the primary mission of the PIO to ensure these goals are achieved. To meet this mission, the PIO should possess some basic communication skills.



The PIO provides the public with information about an incident



A PIO must be knowledgeable about fire fighting operations to gain credibility with the media

- First, the PIO must be an effective verbal communicator. This includes the skills to respond to questions with answers that are concise and succinct.
- Second, the PIO must be able to clarify technical information so that the media and the public easily
  understand it. The PIO must be able to create and maintain a positive, win-win relationship with the
  media and various operations personnel.
- Finally, the PIO must be knowledgeable about fire fighting operations. This is critical to gain credibility with the media and the public.

After every wildfire there is a need for a debriefing. This should occur within a week or two of the fire. In the case of multi-agency operations, inputs from all participating agencies are needed to identify lessons learned and to ensure continuous improvement. All participating agencies are responsible for conducting their own operational debriefings before this consolidated debrief.

Finally, after every incident, a fire report must be completed, pursuant to section 6 of the NVFFA.

National Fire Report Form http://www.nda.agric.za/doaDev/sideMenu/ForestryWeb/webapp/Documents/NationalFIREREPORTFORM.pdf

## 16.3 Communication and dispatch

When an unwanted fire is detected that requires any suppression effort, communication is crucial. Whoever detected the fire must first report and relay the status of the fire to their assisting resources and then, if required, request additional resources through the relevant dispatch centre. Operational information such as fuel information (type), topography, burning conditions, and weather must to be communicated to firefighters and managers.

Communication about the fire line is as crucial as safety is the major factor.

WoF wildfire dispatch centres are set up to receive requests for assistance and then dispatch the relevant required resources to the affected area as soon as possible, by utilising the set Rules of Engagement. A verbal caller interrogation captures the required information and a resource order is then placed with the dispatcher. Dispatchers relay operational information to the relevant landowner/Incident Commander (IC)/stakeholder to keep them updated on the resources deployed.

After a physical dispatch, the operationally deployed personnel report to the IC. Dispatchers may supply/relay additional supporting information to the IC, e.g. weather forecasts and additional resources upon request. The dispatcher keeps a manual occurrence log (where communications allow it) to note the manual operational timeline.

There is interaction with various agencies, e.g. Disaster Management on various levels. Should an Incident Command Post be established with multiple agencies involved, and working with an Incident Command Team (ICT), the dispatchers will receive their resource orders directly from their Provincial Coordinator who is the operational link between the dispatchers and the ICT and not from the landowner or person who originally requested assistance.

Dispatchers are responsible for communicating the information received during a call for a medical emergency to their Provincial Coordinators in order to activate the Emergency Response Plan.

Operational information is considered confidential and dispatchers do not communicate this outside of their mandate. The relevant media liaison person(s) or the landowner will release fire reporting and status updates with additional information as required by the media.

Dispatchers can expedite any physical dispatch to assist with fire suppression if there are pre-determined Rules of Engagement in place. Being a member of a registered FPA served by a wildfire dispatch centre is an advantage during an unwanted fire emergency.

# 16.4 Fire suppression

Landowners are legally obliged to fight fires on their land and to stop them from spreading. Neighbours, FPAs, and Fire Brigade Services can all be called on to assist a landowner.

The National Veld and Forest Fire Act (Act 101 of 1998) requires landowners to have the necessary equipment to fight fires. The specific circumstances will determine what is necessary and can be expected. Several FPAs have developed minimum equipment requirements for members. In general, fire beaters and some basic water tanks are a minimum.

Here is a common guide to the type of equipment needed based on the size of the landholding.



Landowners can call on FPAs, the Fire Brigade Services and neighbours to assist in fighting fires on their land

Property size	<i>"Bakkie Sakkie"</i> min 200L or tractor/trailer	Water tanker min 1000L	Water tanker min 2000L	Rake Hoes	Beaters	Knapsacks min 15L	Drip torch	Cellphone	Hand held radio	Mobile radio	First Aid Kit	Firefighters	Crewleaders
Less than 10 ha		0	0	0	1	1	0	0	0	0	0	1	0
11 - 25	1	0	0	1	4	2	0	1	0	0	1	2	1
26 - 100	1	0	0	2	5	3	0	1	0	1	1	4	1
101 - 500	1	1	0	5	10	4	1	1	1	1	1	9	1
501 - 1000	1	1	0	10	15	10	1	1	2	1	2	10/20	1
1001 - 4000	2	0	2	15	20	10	2	1	4	2	2	15/30	3
4001 - 10000	2	2	1	20	40	20	3	1	4	2	5	25/40	3/4
10 000+	3	3	2	20	40	20	3	1	5	2	5	30/50	4/5
Timber processors	1	1	0	4	4	2	0	1	0	0	1	4/10	1/2
Contractors	1	1	0	5	5	5	2	1	2	1	1	10	1
Cane growers <25 ha	1	1	0	1	4	2	0	1	0	0	1	2	1
Cane growers >26 ha	1	0	0	2	5	2	0	1	0	1	1	4	1

Where two numbers are given the test is to ensure access within 30 minutes and to determine the number based on this.

## Did you know?

You are allowed to enter private property of another person if there is a fire and you believe there is risk to lives, property, or the environment. The NVFFA further provides for the destruction of vegetation or crops in the process of fire fighting. This means if the threat was reasonable, you cannot be sued for such destruction.

# 16.4.1 Do all landowners require fire fighting equipment?

No. Only landowners, on whose land a wildfire could start or burn, require fire fighting equipment. In practice, this includes most landowners.

#### 16.4.2 Initial attack

The first phase of fire fighting, called the initial attack period, is regarded as the most critical phase of the fire suppression efforts. Often the success of the entire fire management programme is reflected in the success or failure of this phase of the fire suppression.

142 FYNBOSFIRE ®

The fire management plan for the area will provide firefighters with instructions on how fires are to be managed. If the plan is reviewed annually, it will specify whether, in some areas, fire should be left to burn as this would benefit the environment, where fires need to be stopped as they pose risks to life, property, and the environment, and what resources are available to suppress the fire.

#### FAQ: What are critical success factors for initial attack actions?

- quick detection and reporting to the relevant support structures;
- properly trained personnel equipped and supported to address local needs;
- · mobilisation of local resources;
- · clear incident command structure:
- · excellent communication systems;
- excellent cooperation and coordination between fire suppression resources and institutions.

Working on Fire has secured resources to provide aerial support for the first hour of fire fighting in some regions. This is an invaluable resource. Landowners wanting to access this support need to sign a memorandum of understanding for aerial support in which they commit to the costs post the initial hour.

The Kishugu Working on Fire *MOU for Aerial Request for Assistance form* used at the time of writing this handbook is included by way of example.

# FAQ: What right does a third party have to fight a wildfire on the land of another?

Section 18(2) of the NVFFA provides as follows:

"Any person who has reason to believe that a fire on any land may endanger life, property or the environment, may, together with any other person under his or her control, enter that land or land to which the fire can spread in order to prevent that fire from spreading or to extinguish it".

The Act further makes it an offence to prevent such a person from entering a property or interfering with them whilst they try to suppress the wildfire.

# 16.4.3 Do landowners have to pay for fire fighting on their land?

Yes. Each landowner is legally obliged to fight fires that start on their property and to stop them from spreading. If you require additional assistance from Working on Fire, your FPA or the Fire Brigade Services, you are obliged to pay for such services.

Some FPAs offer members a discount on these costs, as do some Fire Brigade Services. This is offered as an incentive to encourage landowners to become FPA members.

# Overberg Fire Brigade Services – First hour or fire fighting free for FPA members

The Greater Overberg FPA has negotiated with the Overberg Fire Brigade Service to incentivise FPA membership by providing the first hour of fire fighting services for free to FPA members. This is a carrot and makes good business sense, as a fire detected and suppressed early on is less likely to get out of control. By providing the first hour free the service is encouraging landowners to call in the experts as quickly as possible, thereby reducing their long-term costs.

### 16.4.4 Extended fire suppression

If the fire is not put out in the first hour, there is a need for an extended attack. This requires mobilising further resources to fight the fire, which involves two different acts: the Fire Brigade Services Act (Act 99 of 1987) and the Veld and Forest Fire Act (Act 101 of 1998). The fire department takes the lead at this stage and executes their plans in conjunction with landowners. An incident command system should be established on the fire at this stage.

For a detailed description and further guidance, refer to the 2nd edition of the Fire Managers Handbook on Veld and Forest Fires in 2009, edited for South African conditions by Tiaan Pool of NMMU Saasveld.



### Did you know?

Working on Fire employs the largest percentage of women firefighters in the global fire fighting fraternity.

### 16.5 Safety considerations for firefighters and civilians

Uncontrolled, devastating wildfires destroy homes, businesses, schools, and other structures throughout the world. Protecting communities and saving lives starts with community education and preparation. In addition, one of the best ways to save lives is to have a fire-adapted community, one in which infrastructure and buildings are constructed so as to facilitate subsequent protective actions and in which civilians are able to assist in their own protection and safety.

Civilians should never get involved in direct attack fire fighting unless they received specific training therein, in which case they need to have the minimum personal protective equipment at their disposal. The Incident Commander remains responsible for all activities - also injuries on scene - and it is therefore important to ensure that everyone remains in a safe, manageable situation.

Public safety is very important, but the safety of the firefighter must be given the highest priority. Firefighter safety begins with the provision of the proper safety equipment and training to each individual in fire suppression and prescribed burning operations. Firefighters must also be trained to recognise the characteristics of fire behaviour, such as intensities, spread rates and when a smouldering fire can re-ignite and spread. Crews need to understand how to monitor weather patterns and fires, as well as to estimate potential changes in order to avoid becoming trapped by an unanticipated change in spread or intensity.



Uncontrolled wildfires can destroy homes and other structures

### Did you know?

Protective clothing requirements are not spelt out in the NVFFA, which merely states that the landowner must have clothing that is "reasonably required in the circumstance" for personnel to fight fires. Full fire fighting equipment – jackets, helmets, smoke masks, etc. – is expensive and each landowner cannot reasonably be expected to equip a fire brigade.

In terms of the Act, however, all personnel attending to any veld & forest fire should have reasonable and adequate PPE:

- 100% cotton overall/Conti-suit;
- 100% cotton under shirt/T-shirt;
- 100% cotton/wool socks;
- · leather gloves best full forearm length;
- · fire-retardant balaclava;
- fire/heat-resistant goggles (preferable);
- leather closed boots with heat resistant soles (not gumboots and be careful not to buy synthetic soles they tend to melt in contact with direct embers);
- a few sachets of varying sizes of burn shield gauze/gel.

### 16.6 Managing multiple incidents

For FPAs and Fire Services staff, some of the most difficult and complicated situations occur when multiple fires start simultaneously or when new fires are identified before the initial fire is brought under control. A particular challenge occurs when fires occur across two of more different Fire Management Units and resources need to be prioritised between areas. In such situations, fire management resources are stretched and depleted. Having clear criteria of how prioritisation happens before an incident occurs helps to minimise the conflicts.



# CHAPTER SEVENTEEN REHABILITATION





### 17 REHABILITATION

After a fire there is a need to rehabilitate the burnt area. Often there is an immediate danger of erosion damage to the environment. There is also often a longer-term danger that the burnt area will be prone to invasion by exotic and invasive species. In commercial areas, there may be a need to remove burnt materials and to re-plant commercial crops or trees. Where communities are reliant on the vegetation for livelihoods and income, there may be a need to find temporary replacements to sustain livelihoods.



Restoration is required in areas where the ecosystem has been damaged

Rehabilitation is the responsibility of the landowner or manager. However, there are advantages in engaging suppression crews in rehabilitation activities, as it educates them about what damages ecosystems and also might create opportunities for them to minimise restoration needs by better managing how suppression activities are carried out. For example, crews working on firebreaks could be asked to also construct water bars along the break, which reduces the potential for erosion.



Silt screens help to prevent erosion in an area that is under rehabilitation



# CHAPTER EIGHTEEN MANAGEMENT: COORDINATION, RECORD-KEEPING, AND MONITORING AND EVALUATION





# 18 MANAGEMENT: COORDINATION, RECORD-KEEPING, AND MONITORING AND EVALUATION

### 18.1 Coordination

FPA management is about ensuring members feel there is value in the membership and hence relationship management or value-benefit initiatives are key. It is therefore important that the FPA maintain good relationships with members. This can be done in a number of ways:

- · Property visits.
- FMU discussions and workshops

   pre- and post-fire season. The
   FPO or FPA Manager should go out and interact with members and/or landowners and not simply rely on the FMU Chair to provide information or feedback.



FPAs are an important hub of information

- A regular newsletter in and out of fire season.
- Ensuring that weather warnings are sent out throughout the year, not just in fire season.

Further, the FPA should maintain good working relationships with Government, in particular disaster management services, fire services, agriculture, and South African Police Services. As part of maintaining these relationships, FPAs should participate in all Disaster Management Forums and meet regularly with the Fire Services in terms of planning, risk assessments, compliance issues, and general interaction. It should coordinate with organised agriculture and become participants in SAPS Cluster meetings to ensure the SAPS Station Commanders are fully aware of the legalities of the NVFFA, with specific reference to the offences and the respective charges which would need to be brought against transgressors.

### 18.2 Record-keeping

FPAs are an important hub of information, which requires excellent record-keeping systems to keep it updated. Some of the more important records are detailed below, along with some guidelines.

### 18.2.1 Membership database

FPAs are membership associations and need to first and foremost service their members. To do this effectively FPAs must take specific steps.

- · a membership application form;
- a members' register of contact details, fire-fighting equipment, trained personnel, and any other relevant information;
- · training registers;
- · a membership fees register; and
- · a membership registration list.

Landownership is not static so this information needs to be updated annually. In addition, the FPA should ideally build relationships with real estate agents so they have insight into land ownership changes.

### 18.2.2 Compliance

Compliance records as stipulated below should be kept by an FPA.

- · joint firebreak agreements, where they exist;
- annual review of the Association's resources, i.e. members' equipment and equipment levels;
- · annual firebreak inspections;
- · membership audits, compliance with rules and regulations, and legal compliance; and
- · any compliance letters and spot fines issued.

### 18.2.3 Training Providers

The FPA must liaise with training service providers, understand course content for veld and forest fire operations, and ensure common standards are achieved. As part of ensuring the capacity and compliance of members, the FPA must keep a register of approved providers and facilitate training opportunities.



FPAs are required to facilitate training opportunities to landowners and personnel

### 18.2.4 Education

The purpose of record-keeping is to establish an accurate, detailed record of the organisation's public education activities. Types of information that should be kept include:

- · subject of presentation;
- description of audience;
- · number of people reached by the presentation;
- address/location of presentation;
- · names of personnel involved with presentation;
- · time and date of presentation;
- · customer point of contact; and
- · other information needed by organisation.

### 18.2.5 FPA administration systems

FPAs as public interest institutions need to keep records of meetings, notices, etc. This includes minutes of:

- FPA and FMU meetings; and
- local and district Disaster Management Meetings.

### 18.2.6 Financial administration

An FPA must ensure good management of its finances and keep all records thereof. To assist with this, the FPA must:

- · compile and present its operational budget to members;
- · manage expenditure and revenue against the budget; and
- produce quarterly management accounts that are available to members for inspection.

### 18.3 Reports

### 18.3.1 National Fire Reports

In the event of a wildfire the National Statistical Fire Report form must be completed and faxed to the nearest office of the Department of Agriculture, Forestry and Fisheries. The form can be downloaded from: http://www.nda.agric.za/doaDev/sideMenu/ForestryWeb/webapp/Documents/NationalFIREREPORTFORM.pdf

### 18.3.2 To whom must an FPA report annually?

For the sake of good governance, it is necessary for the executive of an FPA to report annually to its members.

A registered FPA must submit an annual report to the Minister of DAFF to enable the department to monitor the performance of the FPA, as well as the effectiveness of the National Veld and Forest Fire Act (Act 101 of 1998). Failure to submit a report may result in the FPA being deemed inoperative and ineffective, with the result that its registration is withdrawn in terms of Section 8 of the NVVFA.

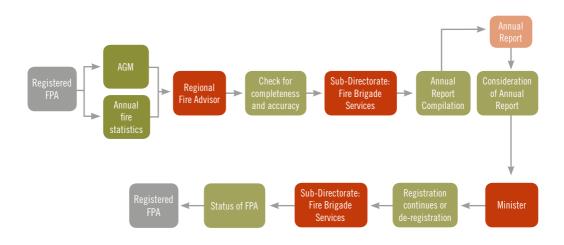
The report must be submitted by 30 June every year.

The report is not confidential and the Minister may make available information about wildfire management contained in the report at any time to any interested party.

The reporting is mandatory in terms of the NVFFA and must be prepared by the FPO.

"6. (1)(e) The Fire Protection Officer must monitor and report to the association and the Minister on compliance with this Act".

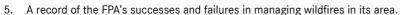
### BUSINESS PROCESS: FPA REPORTING



## 18.3.3 What is the format of the annual FPA report to DAFF?

The following information needs to be covered in the annual report to DAFF.

- A progress report on the attainment or otherwise of the aims and objectives specified in the business plan, and the implementation of the business plan as a whole.
- 2. A statistical summary of the causes, extent and consequences of veldfire in the FPA's area.
- A summary of offences allegedly committed, prosecutions undertaken, and convictions achieved in terms of the Act and any relevant by-laws in the area of the FPA.
- A report on compliance with the Act as required of the FPO.



- 6. Suggestions on possible improvements to the Act and its interpretation, regulations, and guidelines.
- A report on how organs of state and municipalities have or have not complied with the rules of the FPA.
- 8. A summary of changes in membership, including new members and termination of membership, with reasons given for termination.
- An account of any major changes to the business plans that have been made to improve the functioning of the FPA.
- 10. Any other relevant information.

The template for annual FPA reports to DAFF can be downloaded here: http://www.nda.agric.za/doaDev/sideMenu/ForestryWeb/webapp/Documents/FPA\_AnnualReporting\_Template.pdf

### 18.4 Assessments

### 18.4.1 What is the purpose of an assessment?

Increasingly assessments are moving away from a checklist where participants are either right or wrong and achieve a pre-defined standard to a tool that is used in improving management.

The process assesses and rates the robustness of management systems against a hierarchy of principles, criteria and indicators.

- 1. In the initial phase of development of a management system, the goal of such assessment must be to establish a system that can minimise further damage or losses.
- 2. In the next phase of development, management efforts should be directed towards putting in place systems that optimise the resource utilisation.
- 3. Finally, management efforts should then be directed to ensure that the investments are not lost through a range of external factors.

### 18.4.2 How should landowner-compliance be assessed?

Assessment of fire management systems of individual landowners should be carried out with three outcomes in mind.



1	That the risk of negative impacts, associated with the occurrence and spread of wildfires on a particular property, is minimised.
2	That fire in the natural areas of their property is managed so as to reflect the natural/historical fire regimes of the natural ecosystem.
3	That the achievement of outcomes 1 and 2 is pursued by the majority of land users across the shared agricultural or natural system, and that the landowner participates in specific programmes and initiatives, including a fire protection association, aimed at achieving Integrated Fire Management and sustainable land management dynamics for the agricultural and natural ecosystem as a whole. The risk of negative impacts, associated with the occurrence and spread of wildfires on a particular property, is minimised.

Farming operations that are upholding the first outcome understand the vulnerability of agricultural production, agricultural systems, and ecosystems to wildfires, and have specific strategies and management systems, and take specific actions, aimed at minimising the threat of wildfires and associated damage. Good practices that support the fulfilment of this outcome are listed below.

- Landowners prepare and maintains firebreaks on the properties and, where appropriate and by agreement with neighbours, realign the firebreaks so that they are not located on the property boundaries but in locations where they will prove most effective in wildfire suppression.
- Farm management has adequate fire-fighting equipment at its disposal to suppress a wildfire when it starts and to contain its spread.
- Farm management has adequate fire fighting personnel at its disposal, whether employed by the farm or elsewhere, to contain the spread of a wildfire on the farm.
- The landowner is a member the local FPA.

All, other than membership of an FPA, are mandatory. These are the minimum requirements that need to be met.

Fire in the natural areas of the property must be managed so as to reflect the natural/historical fire regimes of the natural ecosystem.

The management or use of fire is necessary to promote both natural systems and the regeneration of biodiversity, while reducing the fuel load and thus the associated fire hazard. Wildfires pose significant economic risks as well as impact on natural resources, biodiversity, and ecosystem functioning. Land management practices should illustrate an understanding of the key role that fire plays in natural ecosystems, and there should be specific strategies and management systems in place and specific actions taken aimed at managing fire in the natural areas in a way that mimics the historical fire regimes that characterise these systems. Good practices that reflect this are listed below.

- The landowner meets the requirements of the first outcome relating to the management of wildfires.
- The landowner is aware of the natural fire characteristics and requirements of their specific biome/ecological region and natural system.
- The landowner secures the input of relevant experts, neighbours, and local natural resource managers specifically to determine the appropriate fire management regimes required for all natural areas, including water courses.
- There is a fire management plan for the farm in place that meets legal, safety, and practical requirements.



- The fire management plan specifically incorporates the appropriate use of fire within the areas of natural vegetation on the farm and provides for prescribed burning.
- Where there is a risk of veldfire starting within the farm boundary and spreading beyond it, management prepares and maintains firebreaks on the farm and the adjoining land and, where appropriate and by agreement with neighbours, realigns the firebreaks so that they are located not on the farm boundaries but in locations where they will prove most effective in fire suppression.
- The landowner is a member of the local FPA.

The achievement of outcomes 1 and 2 above is pursued by the majority of land users across the shared agricultural or natural system, and the landowner participates in specific programmes and initiatives, including an FPA, aimed at achieving Integrated Fire Management and sustainable land management dynamics for the agricultural and natural ecosystem as a whole.

The natural systems of different properties are highly interconnected and the boundaries of the natural systems often extend well beyond the legal boundaries of individual properties. The result is that the actions of individual landowners in the natural system, whether they have positive or negative ecological and economic consequences, impact other landowners via this highly interconnected system. The ability of individual landowners to achieve optimal management that is no longer highly susceptible to the impacts of wildfire ultimately depends upon the actions of the other landowners in the system. If achieving IFM is the objective at the level of the individual property, then all the landowners in the system need to pursue this same objective, and collaborate and coordinate their actions to achieve it.

Landowners that achieve this outcome understand this larger system and the interconnections and dependencies within it, particularly as they relate to managing wildfires. They have specific strategies and management systems and take specific actions aimed at enrolling other landowners to participate in FPAs to engage in proactive planning, to undertake risk minimisation programmes, and to participate in other collaborative system-wide programs aimed at achieving IFM across the system. Good practices that reflect this are geared towards encouraging and achieving a high level of information sharing and collaboration with the other landowners across the shared system. Practices that should be included are listed below.

- The landowner meets the requirements of the first two objectives.
- The "boundary" of the shared system is defined and the other key landowners are identified.
- · The key challenges within the system related to the impacts of wildfires are identified.
- External expertise, such as from local academic institutions, is sought to support greater understanding of system-wide issues and challenges related to the impacts of wildfires, as well as the management responses based on IFM.
- The landowner actively seeks out existing initiatives and programmes that specifically support understanding of the wildfire dynamics of farms and the associated impacts.
- The farm is an active member of the FPA, regional growers' associations, study groups or other
  forums that support engagement and collaboration on shared issues and challenges related to
  wildfires as well as securing landscape-level support for fire management initiatives.

An example of an FPA "audit" form and progress checklist and a template FPA Member Assessment form is attached.

### 18.4.3 Is the FPA functional?

To assess the effectiveness of individual landowners, it is important to ensure that FPAs are able to meet a set of legal and management objectives. Again, this is a repeated process that uses legal requirements as its starting point and then provides a management tool that can assist with optimising the scope and influence of the FPA.

- 1) The FPA has developed structures and systems to prevent and fight wildfires.
  - a) There is effective communication and coordination among members of the FPA.
  - b) There is sound planning and coordination with fire brigade services, disaster management, and other services.

- c) The wildfire management strategy is in place and has broad stakeholder support.
- d) The wildfire management strategy in the business plan includes a proper risk and vulnerability assessment.
- e) The business plan is effectively implemented and owners, as defined in the Act, have implemented their IFM plans.
- f) Owners comply with the FPA's rules and the minimum requirements of the Act.
- g) Fire protection and prevention measures, including firebreaks, are in place.
- 2) The FPA, either directly or through its members, is ready with equipment or trained employees.
  - a) The FPO is registered and has assumed powers under the Act.
  - b) The early warning system (National Fire Danger Rating System) is operating, communicated and aligned with rules and practices.
- 3) The FPA is organised to fight wildfires.
  - a) Owners know and understand their roles and responsibilities.
  - b) Municipal fire services and disaster management know their roles, and agreed wildfire contingency plans are in place.
  - c) Mutual-assistance agreements are in place with any neighbouring FPAs.
  - d) The relationship with the Working on Fire programme is clearly defined.
  - e) Support is available from an umbrella FPA (e.g. aerial support).
  - f) Joint operating centres (JOCs) work to coordinate resources.
  - g) The JOC is under the coordination and control of a single person, the FPO.
  - h) All organisations involved in fire fighting are included in planning and decision-making structures, and their representatives are empowered to take decisions.
  - i) All necessary communications and resources are available and properly coordinated.
- 4) The FPA is able to respond effectively to wildfires.
  - a) The relevant persons are trained in standard wildfire incident command fire bosses know what to do and how to do it.
  - b) Escalation procedures are in place and it is clear how to pass the command upwards from owner to FPO to CFO to Province.
  - c) Standard operating procedures are in place, known and applied.
  - d) Safety measures for personnel are of the highest standard.
  - e) Resource tracking systems are in place, i.e. the IC/FPA knows at any time where resources are being deployed.
  - f) Emergency services can take care of the knock-on effects of wildfires (traffic control, evacuations, etc.).

The detailed assessment format for individual FPAs that has been developed by the national FPA coordinating body is attached as a tool.





# CHAPTER NINETEEN MAPPING AND GIS SYSTEMS





### 19 MAPPING AND GIS SYSTEMS

Management cannot manage what it does not know and cannot measure. An important part of IFM is the identification of fire risks, including the likelihood of a fire and the consequences should one occur. Sometimes this involves competing demands. For example, while an event like a fire may be unlikely to happen, its consequences can be major or even catastrophic. Consequently, plans are needed to minimise risk. When planning fire management, it is important to think about economic, environmental, and social risks (risks to people). The impact of both fire prevention activities and the fire itself can affect safety, the environment, and the long-term sustainability of a property.

For an FPA to be in a position to fully understand its area of operation, it is of vital importance that the FPA undertakes a detailed mapping exercise, which reflects the areas listed below.

- The boundary of the FPA area of operation and how the boundaries align with neighbouring FPAs. (It is important that boundaries do not overlap and that there are no "open areas" between FPAs). This should also include any FMU boundaries.
- Landowner or member cadastral boundaries. These can be obtained from the Local Municipality or District Municipal GIS departments, the Deeds Office, or the Department of Agriculture.
- An overview of land including:
  - vegetation type;
  - land use;
  - urban-rural fringe (informal settlements, other high risk nodes);
  - high risk nodes properties, industrial, storage facilities, depots, etc.; and
  - other strategic or vulnerable infrastructure.

This is the bare minimum needed.

With geographic information systems available, most FPAs have supplemented this general information with other relevant details.

- · Member land and member information:
  - contact details;
  - GPS coordinates;
  - equipment on farm;
  - proximity of fire services resources including District Municipality fire services. WoF and any private sector capacity including:
    - identify where WoF teams are located proximity to WoF team resource, contact details of base manager, crew leader, number of crew available, type of transport and equipment available, etc.;
    - identify fire stations proximity to fire stations, contact details, type of equipment;
    - identify airstrips in the region for fixed wing aviation support at fires length of runway, water point capacity, contact details to activate airstrips; and
    - identify water points more specifically for ground resources to replenish mobile water supplies and including key dams and reservoirs that are identified for aerial helicopter support;
  - identification of key assets and key fire safety risks, including those from adjacent properties and features including:
    - assess whether the risks identified are relevant and/or significant to the property by considering the likelihood and consequences of these risks happening; and
    - consider impacts on adjacent properties and features.

This is the second level of detail. A final layer includes a more detailed assessment per FPA member property, which forms layers to the core mapping/GIS system and are listed below.

- the risk assessment will identify fuel loads (and categorise the fuel load blue to red, on a similar basis to the FDI/DM Advisory);
- strategic firebreaks and where such should be placed;
- natural buffer zones;

- · roads, in terms of access and control points;
- Eskom Transmission Lines 132-765 Kva lines;
- · other strategic or vulnerable infrastructure; and
- public areas such as camping, lookout points, etc.

Mapping and an interactive GIS system are vital tools for the overall management of the FPA as well as a tool for the ICS. Further information layers can be added to mapping that will assist in managing the FPA area and in respect of fire suppression activities (ICS). For example, if there is a comprehensive GIS, the FPA can allow member and fire services vehicle tracking systems to be linked to mapping, which assists with the management of vehicles at a fire or even where vehicles should be located on days of readiness. Similarly, aircraft tracking can be done. Finally, a well-managed mapping/GIS system can assist the FPA in identifying non-compliant landowners - the nature of non-compliance relative to the risk assessment.

After a fire there is also a need for mapping so that rehabilitation work can be monitored, but also so that any reallocation of resources can be made based on actual risks and not historic risks.

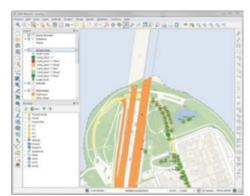
There are a number of mapping and GIS systems available on the market, varying in cost from open source (free) to expensive (which in turn often requires training and a dedicated staff member), some of which are listed below.

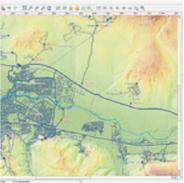
**QOUGLE EARTH** is one of the more common. It is easy to use and the more one uses Google Earth, the more updated the imagery:

- Google Earth can interact with a number of other applications, which makes electronic display of such information easy; and
- printing of maps is not really possible, unless the FPA wants photo quality mapping or imagery.

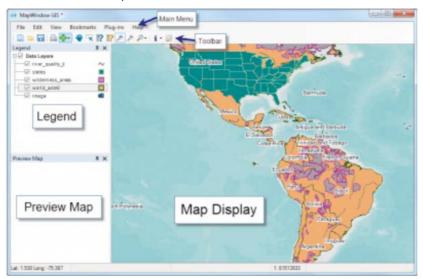


- QGIS free open source GIS mapping:
- · create, edit, visualise, analyse, and publish geospatial information; and
- for Windows, Mac, Linux, BSD, and Android.

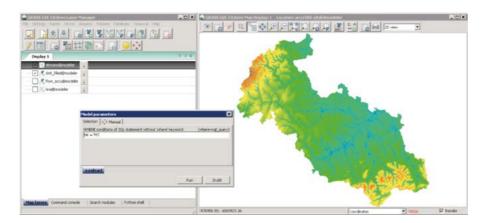




### MAPWINDOW GIS Open Source



### **Q GRASS GIS** Open Source





# CHAPTER TWENTY TRAINING: BUILDING IFM CAPACITY





### 20 TRAINING: BUILDING IFM CAPACITY

Training is an essential part of both fire preparedness and safety. Landowners need to be trained in the basics of fire fighting, and personnel involved in fighting fires need to be properly trained. Such training varies from region to region but includes a number of basic elements outlined in this section.

Basic fire fighting training is needed, which includes information on the National Veld and Forest Fire Act (Act 101 of 1998), the fire danger rating, understanding fires and wildfire behaviour, safety at fires, handling of equipment and tools, and communication.

More advanced and specialised training is needed in a range of areas including:

- Wildfire Behaviour Principles (fuel, weather, topography, fire behaviour, fire safety);
- Integrated Fire Management Principles (prevention, protection, suppression);
- · Risk Analyses (risk determination and offset of risks);
- Community Risk Reduction/Fire and Life Safety Educator (level I);
- · Planned/Prescribed burning;
- · Radio Communication;
- FDI System Planning for high fire danger;
- · Strategic Fire Management Planning;
- · Urban Interface Management;
- · Infield Simulation Sessions;
- · Wildfire Suppression: Basic;
- · Fire Ecology and Conservation;
- Basic ICS; and
- · Advanced ICS (managing disaster fires).



A basic fire fighting training session for farm workers



# CHAPTER TWENTY ONE INCENTIVES AND ENFORCEMENT





### 21 INCENTIVES AND ENFORCEMENT

### 21.1 Incentives

### 21.1.1 Incentives offered by FPAs

A range of incentives is being offered by fire protection associations around the country to assist landowners to discharge their legal obligations. These provide incentives to become part of the FPA. Some of the services are listed below.

- 1. Assistance to discharge a duty to maintain firebreaks in terms of section 12(1):
  - a. assistance with firebreak management planning, cutting, and maintaining firebreaks;
  - b. assistance with securing realignment in terms of section 12(7); and
  - c. assistance with securing exemptions in terms of section 15(1).
- 2. Assistance to discharge a duty to have fire fighting equipment, protective clothing, and trained personal (section 17(1)(a)) through:
  - a. a contracted service provided through the FPA managing Working on Fire teams; and
  - b. mutual-aid agreements between landowners brokered by the FPA.
- 3. Assistance with services to discharge the duty to have responsible persons present on or near the land who, in the event of fire, will extinguish the fire or assist in doing so (section 17(1)(b)(i).
- 4. Assistance with the duty to take all reasonable steps to alert the owners of adjoining land and the relevant FPA of a fire (section 17(1)(b)(ii)).
- 5. Assistance with coordinating the fire suppression efforts of other FPA members.
- 6. Membership enables landowners to avoid the Presumption of Negligence (refer to chapter 9, section 34 of NVFFA).

#### 21.1.2 Rates rebate

A range of rebates exists within local government.

- Rebates on rates and services for sectors such as the agricultural sector. This incentive can only be
  implemented in metropolitan areas as in the districts 'B' municipalities charge rates. 'C', or district
  municipalities, however, do not charge.
- Waiver of charges for burning permits in some areas.
- Rates-based incentives are only possible in the metropolitan regions where 'A' municipalities are
  responsible for rates and for wildfire management. Outside of the metros, the 'B' municipalities are
  responsible for rates and the 'C' municipalities for wildfire management. As a result, any landowner
  rates or service charge rebates are unlikely to be agreed.

Most 'C' municipalities are under pressure to increase revenue and Chief Fire Officers have all been asked to recover fire fighting costs from landowners and their insurers. Offering recovery incentives to people who are members of FPAs is a quick win and under the control of Districts. The Overberg is already doing this.

### 21.1.3 Fire fighting cost rebates

Within the Overberg District, the District Municipality is already offering members of FPAs the additional incentive of an hour of free fire fighting support in fire suppression on their properties. Similar incentives could be offered in other areas to encourage wall-to-wall membership.

### 21.1.4 Insurance rebates

Insurance rebates are already offered to members of FPAs. For example, one insurer, Mutual and Federal, already offers a R500 incentive to agricultural clients. This rebate follows solely by virtue of a landowner's

membership of an FPA, with no regard to whether the landowners have complied with their obligations in terms of the Act or not. Other insurers such as Santam offer public insurance rebates, also on the basis of membership.

Ideally these rebates should be linked to compliance as well or further rebates should be offered for compliance. This is costly, however, and there is limited appetite to complicate the system. As FPAs become more robust, and it is increasingly possible for the FPA to monitor compliance by its individual members, it may be feasible to look to linking these benefits to annual compliance certification from the FPA.

### 21.2 Enforcement

## 21.2.1 What is the role of the FPA in enforcement?

While the FPA must not become known as a "policeman" it is important that it is firm in its approach, and fair to all members. The FPA must also lead prosecutions via the appropriate bodies (SPAS, FPA, and Insurance) for repeat offenders. This is particularly important where the FPA is involved in compliance monitoring on behalf of the FPO or as the FPO.



# 21.2.2 What are the offences created by the National Veld and Forest Fire Act (Act 101 of 1998)?

The NVFFA provides for a number of offences.

- 1. General duties to prevent fires starting:
  - a. lighting, using or maintaining a fire in the open air when a warning has been issued in terms of the Fire Danger Rating (section 25(1));
  - b. leaving a fire in the open air unattended, which he or she lit, used, or maintained before that fire is extinguished (section 25(2));
  - c. lighting, using, or maintaining a fire which spreads and causes injury or damage;
  - d. throwing, putting down, or dropping a burning match or other burning material or any
    material capable of spontaneous combustion or self-ignition and, by doing so, making a fire
    which spreads and causes injury or damage;
  - e. lighting, using or maintaining a fire in a road reserve except if it is in a designated fireplace or is for the purpose of burning a firebreak; and
  - f. smoking where smoking is by notice prohibited.
- 2. Duties on landowners in relation to Integrated Fire Management:
  - a. failing to prepare a firebreak when obliged to do so by the Act;
  - b. failing to give notice of intention to burn a firebreak as required by the Act;
  - c. burning a firebreak when a fire protection association has objected to it being burnt;
  - d. failing to inform adjoining owners should a firebreak or prescribed burn not take place as planned;
  - e. failing to meet the standards of readiness for fire fighting required by the Act;
  - f. failing to notify the FPO and adjoining landowners of a threatening wildfire;
  - g. refusing to assist an FPO or other enforcement officer as required by the Act; or
  - h. hindering or obstructing any person or enforcement officer wanting to enter land to fight a wild-fire (section 25(4)].

- 3. General duty on landowners to prevent the spread of wildfires:
  - a. any owner, occupier or person in control of land on which a fire occurs failing to take reasonable steps to extinguish the fire or to confine it to that land or to prevent it from causing damage to property on adjoining land (section 25(5)).
- 4. Interference with enforcement:
  - a. preventing a FPO or other enforcement officer from exercising the powers of entering, searching, seizing or arresting in terms of the Act or in the performance of his or her duties in relation thereto (section 25(6)).

## 21.2.3 What are the penalties for contravention of the National Veld and Forest Fire Act?

The NVFFA makes provisions for fines, imprisonment, and community service for those committing offences in terms of that Act.

## 21.2.4 Who has the power to enforce the National Veld and Forest Fire Act?

The provisions of the NVFFA can be enforced by the following persons (section 26):

- 1. if registered by the Department, an FPO;
- 2. a forest officer;
- 3. a police officer; and
- 4. an officer appointed in terms of section 5 or 6 of the Fire Brigade Services Act, 1987.

### 21.2.5 What are the legal powers of the FPO?

A fire protection officer has the following legal powers in terms of the NVFFA:

- 1. power to enter and search (s27);
- 2. power to seize (s28);
- 3. power to arrest (s29); and
- 4. power to arrest (s30).

### 21.2.6 What is the procedure for dealing with non-compliance?

Ultimately it is desirable to have all landowners willingly collaborating around IFM initiatives. The failure of landowners to comply with their legal obligations often are borne out of either ignorance of the obligations or ignorance of the consequences of their failure to comply. The problems of compliance can be dealt with in most cases through the annual assessment of individual landowners.

Where problems do emerge with non-compliance, it is recommended that certain procedures are adopted.

- 1. Notify the landowner of his or her legal obligations in terms of the applicable legislation as well as the consequences for non-compliance. These consequences could include the following:
  - a. criminal prosecution for contravention of the legislation;
  - b. possible civil claims, particularly as the landowner would no longer be able to fall back on claims of ignorance;
  - possible increased financial exposure, arising from repudiation of claims or denial of cover by insurers of errant landowners; and
  - d. if the legislation allows it, the responsible authority itself undertaking the activity and recovering the costs from the landowner.
- An example of a *Non-Compliance Notice* is attached.

There is no reason why the notification cannot be sent by one landowner to another. Should the landowner fail to comply with the notice or a notice be deemed inappropriate, the FPO or enforcement officer can consider the issuing of a spot fine.

The *Determination for the Admission of Guilt* Fines according to the National Veld and Forest Fire Act (Act 101 of 1998) is attached.

Should the fine not elicit the desired response, criminal proceedings should be considered.

### 21.2.7 What other sanctions does an FPA have at its disposal?

All landowners who are members of an FPA are bound by the rules and regulations of that FPA. The rules make provision for certain minimum levels of compliance with the provisions of the NVVFA and other related legislation. Landowners failing to abide by these rules can be faced with suspension or termination of their membership and the various benefits that flow from such membership.

One of the immediate consequences would be that the presumption of innocence would no longer apply and the errant landowner may also find insurance cover being suspended. The rules of the FPA must make clear provision for such suspension or termination.



176

# CHAPTER TWENTY TWO GLOSSARY







### 22 GLOSSARY

TERM	ABBREVIATION	DESCRIPTION
Advanced Fire Information Systems	AFIS	Satellite fire-detection system that records incidences of fire as well as burn scar information. www.afis.co.za. The app can be downloaded for smart phones and tablets.
Aerial ember		An ember carried aloft by wind ahead of a fire and able to cause spotting to occur.
Air mass		A meteorological term referring to an extensive body of air within which the conditions of temperature and moisture, in a horizontal plane, are essentially uniform.
Anchor point		An advantageous position or location, usually a barrier to fire spreads, from which to start constructing fire control lines or for anchoring counter of backfires. They are used to minimise the chance of being outflanked by the fire while constructing the control line.
Arson fire		An uncontrolled fire wilfully ignited by someone without consent of the owner or his/her agent with the intention that it burn, or spread to vegetation or property. According to South African criminal law, arson consists in unlawfully setting an immovable structure on fire with intent to cause injury. The word arson should not be used unless structures are involved. Rather use the term "malicious damage to property" to cover veldfires.
Assets		Anything valued by people, which includes houses, crops, forests, and, in many cases, the environment.
Atmospheric stability		The degree to which the atmosphere resists turbulence and vertical motion.
Attack a fire		Limit the spread of fire by any appropriate means.
Available fuel		The portion of the total fuel that would actually burn under various environmental conditions.
Back burn		A method of indirect fire fighting whereby fire is used to widen the firebreaks and to remove fuel load ahead of approaching fire.

TERM	ABBREVIATION	DESCRIPTION		
Bakkie sakkie		_	nting unit. Usually ted to a pick-up tru	a tank and pump combination uck.
Beaufort scale		A numeric scale used to estimate the force of the wind when no instruments are available:		
		Wind speed (km/h)	Designation	Description
		< 2	calm	smoke rises vertically, trees do not move
		2-5	light air	smoke drift indicates wind direction
		6-11	light breeze	weather vane moves, leaves rustle
		2-19	gentle breeze	leaves and twigs in constant motion
		20-29	moderate breeze	dust and loose paper are raised, small branches move
		30-38	fresh breeze	small trees sway
		39-50	strong breeze	large branches move, wind whistles wires
		51-61	moderate gale	whole trees move, walking is affected
		62-74	fresh gale	twigs break off trees, walking is difficult
		75-86	strong gale	slight structural damage occurs, branches break
		87-100	whole gale	trees uprooted, considerable structural damage
		101-118	storm	widespread damage
		119+	hurricane	severe and extensive damage
Berg wind		The flow of air from a high-pressure system to low-pressure system. The air warms as it descends at 1.5° C per 300m (1000ft). It also speeds up and dries out. In the Eastern Cape and KwaZulu-Natal, the berg winds blow from the northwest. These are the most dangerous fire-weather winds as they are very strong and dry. They normally precede a frontal system.  In the Western Cape, strong southerly winds, combined with high temperatures during the dry summer months, tend to drive wildfires.		
Block burn		A prescribed b	ourn in a pre-deterr	mined and specified land area.
Blow-up		sufficient to pr plans. Often a	eclude direct cont	ensity or rate of spread of a fire, rol or to upset existing suppression lent convection and may have other
Brandbeskerms- vereeniging	BBV	The Afrikaans	term for a Fire Pro	tection Association.
Brush		by shrubby, wo		tands of vegetation dominated r-growing trees, usually of a type er management.

TERM	ABBREVIATION	DESCRIPTION
Brush fire		A fire burning in vegetation that is predominantly shrubs, brush and scrub growth.
Burn Permit		A permit that is required before undertaking any planned open burning/fire namely, the burning of a bonfire, vegetation debris or other fire in an outdoor location where fuel burned is not contained in an incinerator or outdoor fireplace.
		Burn permits are obtained from the District Municipality or the Local Authority.
Burning ban		A declared ban on open-air burning within a specified area, usually due to sustained high fire danger. The declaration is usually by a by-law passed by the local authority or a regulation enforced by the Fire Protection Officer of an FPA.
Burn scar		The area burnt by a fire.
Burning conditions		The state of the combined factors of the environment that affect fire behaviour in a specified fuel type.
Burning program		A program of prescribed burns scheduled for a designated area over a nominated time, normally looking ahead over one fire season (for the coming spring to the following autumn), but can also look ahead five years or more.
Burning rotation		The period between re-burning of a prescribed area for management purposes.
Burning unit		A specified land area for which prescribed burning is planned (often referred to as a "block burn").
Burnout		A method of indirect fire fighting whereby fire is used to widen firebreaks on the fire flanks.
Canopy		The crowns of the tallest trees in a forest – the overstorey cover. Can be the tallest plants creating a cover in any vegetation type, i.e. fynbos canopy.
Catastrophic fire		A fire that causes unrecoverable damage to property, loss of life or limb. In plantations, the area is more than 100 hectares.
Chief Fire Officer	CFO	The person appointed in terms of section 5 of the Fire Brigade Services Act (Act No. 99 of 1987), to be in charge of a fire brigade service.
Climate		The atmospheric conditions of a place over an extended period of time.
Closure		Legal restriction, but not necessarily the elimination, of specified activities such as smoking, camping or entry that might cause fires in a given area.
Cold front		A cold front is the delineation between cold polar air moving towards the equator and undercutting warm tropical air moving towards the pole. The temperature differences across a cold front can be extreme and are associated with strong winds. The warm tropical air is forced to rise and become unstable with the development of large cumuliform clouds. Severe weather such as thunderstorms, squall lines and severe turbulence may accompany these cold fronts.

TERM	ABBREVIATION	DESCRIPTION
Combustible		Any flammable material that, in the form in which it is used and under the conditions anticipated, will ignite and burn.
Combustion		Rapid oxidation of fuels producing heat, and often light.
Comparative Risk Assessment	CRA	A set of procedures, i.e. a protocol, for the simultaneous assessment and ranking of diverse risks. The term distinguishes this protocol from the procedures employed for univalent risk assessment, where risks arising from the exposure of, usually humans, to, for example, a toxic compound, are assessed through a dose-response relationship, i.e. an "objective characterisation of the distribution of possible outcomes".
Condition of vegetation		The stage of growth or degree of flammability of vegetation that forms part of a fuel complex.
Conflagration		A raging, destructive fire. Often used to describe a fire burning under extreme fire weather. The term is also used when an uncontrolled veldfire burns into an urban interface zone, destroying many structures.
Consequence		An adverse effect to health, property, the environment or other things of value.
Continuous fuels		Combustible material with no natural or man-made break to stop the fire spread through it.
Controlled fire		A fire that is subject to a line of control around a fire, any spot fire from it and any interior island to be saved, effectively preventing any unplanned spread.
Control Room		24-hour call centre receiving and dispatching all emergency calls, which, in this context, has a focus on wildfires.
Controlled burning		Often incorrectly used to refer to a "prescribed burn". See "Controlled fire".
Convection		As applied in:
		<b>Meteorology</b> – atmospheric motions that are predominantly vertical, resulting in vertical transport and mixing of atmospheric properties; distinguished from advection; or
		<b>Thermodynamics</b> – convection, along with conduction and radiation, is a principal means of energy transfer.
Convection column		The rising column of smoke, ash, burning embers, and other particle matter generated by a fire.
Convective activity		General term for manifestations of convection in the atmosphere, alluding particularly to the development of convective clouds and resulting weather phenomena such as showers, thunderstorms, squalls, hail and tornadoes.
Crown fire		A fire that burns in and advances through the top leaves of the canopy of the trees or vegetation.
Dead fuel		Combustible material made of dead matter and with moisture content that is entirely governed by the atmosphere and weather conditions - either wetting or drying it out. Also called 'dead and down' fuels.

TERM	ABBREVIATION	DESCRIPTION
Debris burning fire		A fire spreading from any fire originally ignited to clear land or burn rubbish, garbage, crop stubble or meadows (excluding incendiary fires).
Defensible space		An area, typically a width of 10m or more, between a property and an approaching wildfire, where the combustible material has been removed or modified.
Department of Agriculture, Forestry and Fisheries	DAFF	The government department within South Africa currently responsible for the administration of the National Veld and Forest Fire Act.
Direct attack		A method of fire attack where wet or dry fire fighting techniques are used, in suppression action, right on the edge of the fire, which then becomes the fire line. It generally involves firefighters moving directly onto the fire line to extinguish the flames. This generally happens when the flames are lower than 1.2m.
Disaster risk		The chance that there will be a harmful impact of some kind, due to the interaction between natural or other hazards and conditions of vulnerability.
Dry hydrant		An arrangement of pipe, permanently connected to a water source other than a piped, pressurised, water supply system, that provides a ready means of water supply for fire fighting purposes and that utilises the suction capability of fire department pumpers.
Duff		The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles and leaves and immediately above the mineral soil.
Ease of ignition		The relative speed with which a fire can be started. Picture a traditional braai fire. You start with some newspaper and grass or leaves, then you add some twigs, then some branches and when it's burning properly you add your logs. Grass ignites very easily but burns out fast. The heat from the grass is enough to ignite the twigs and so increases the ease of ignition.
Ecological burning		A form of prescribed burning. It involves the treatment of vegetation by burning it in predetermined season, frequency and intensity to achieve specified ecological objectives.
Ecosystem services		The benefits that people and communities obtain from ecosystems.
Escape route		The route away from dangerous areas on a fire line, which should be pre-planned.
Evacuation		The temporary relocation of persons, their possessions and domestic animals from locations threatened by wildfire to safe areas.
Evacuation zone		A safe area demarcated for the evacuation of communities during extreme wildfires. The zone should protect people from extreme exposure to radiation, flames, aerial embers and smoke.
Exposure		Property that may be endangered by a fire burning in another structure or by a wildfire; or the direction in which a slope faces, usually with respect to cardinal directions; or the general surroundings of a site with special reference to its openness to winds.

TERM	ABBREVIATION	DESCRIPTION
Extended attack		When a fire outstrips the initial attack resources and further resources need to be deployed. The transition from initial to extended attack does not necessarily have a time trigger, e.g. after the first eight-hour resource shift. The trigger is when the initial attack resources have to call in back-up teams because they cannot contain the fire. In extreme fire behaviour conditions, this can even happen before the initial attack resources have got to the fire, e.g. if the fire started at the bottom of a north facing plantation slope with a 40km/h NW wind.
Extreme fire behaviour		A level of wildfire behaviour characteristics that ordinarily precludes methods of direct suppression action. One or more of the following is usually involved:
		high rates of spread
		prolific crowning and/or spotting
		presence of fire whirls
		a strong convective column
		Predictability is difficult because such fires often exercise some degree of influence on their environment and behaves erratically, sometimes dangerously.
Fine fuels		Fast-drying dead fuels, generally characterised by a comparatively high surface area-to-volume ratio, which are less than 4mm in diameter. These fuels (grass, leaves, needles, fynbos etc.) ignite readily and are burn rapidly when dry.
Fire		In this context, either a wildfire or a prescribed burn.
Fire activity		A general term for the incidence, kind and behaviour of wildfire; see also fire regime.
Fire behaviour		The manner in which a fire reacts to the variable influences of fuel, weather and topography.
Fire boss		Early term used to identify the Incident Commander, in command of a veldfire operation. This could also refer to the Operations Section Chief in the incident management team.
Fire brigade		Municipalities may have a fire brigade service that is trained and equipped to attend to emergency incidents ranging from hazardous chemical spills to road accidents, but predominantly both structural and veldfires.
Fire climate		The composite pattern or integration over time of the fire weather elements that affect fire occurrence and fire behaviour in a given area.
Fire danger		The sum of constant danger and variable danger factors affecting the inception, spread and resistance to control, and subsequent fire damage; often expressed as an index.

184 FYNBOSFIRE ®

TERM	ABBREVIATION	DESCRIPTION
Fire Danger Index	FDI	Fire Danger Index is an index created to measure the degree of danger of wildfire in an area, its rate of spread and difficulty of suppression.
		The index is calculated by combining the temperature, humidity, and wind speed.
		<b>Dry-bulb temperature:</b> the higher the temperature the quicker the fire fuels dry out and the closer the ignition point.
		<b>Relative humidity:</b> the amount of water vapour available in a parcel of air. The lower the relative humidity the more fuels dry out and the greater the fire risk.
		Wind speed: the higher the wind speed the faster the fire will move.
		<b>Previous rainfall:</b> the drier the fuels, the more readily they will burn (fuels get very dry when the rainfall is at its lowest).
		It is normally denoted by a number out of 100 or by a colour. There are five colour ratings.
		Blue - 0 to 20
		Safe conditions for fire spread
		Green - 21 to 45
		Moderate conditions for fire spread
		Yellow - 46 to 60
		Dangerous conditions for fire spread
		Orange - 61 to 75
		Very Dangerous conditions for fire spread
		Red - 76 to 100
		Extremely Dangerous conditions for fire spread
Fire Danger Rating	FDR	A relative class denoting an evaluation of the rate of spread or suppression difficulty for specific combinations of temperature, relative humidity, drought effects and wind speed. Rated as low, moderate, high, very high or extreme, indicating the relative evaluation of fire danger.
Fire danger region		A region determined according to Section 9(3) of the National Veld and Forest Fire Act for the purposes of fire danger rating.
Fire ecology		The study of the relationships between fire, the physical environment and living organisms.
Fire environment		The surrounding conditions, influences, and modifying forces of topography, fuel and weather that determine fire behaviour.
Fire flank terminology		Where the fire started is the origin, base or tail. Where the fire is spreading forward is called the head. Facing the head, the left hand side of the fire is the left flank. The right hand side is the right flank. Sections of fire breaking away from the fire head or flanks are called fingers.
Fire frequency		A general term referring to the recurrence of fire in a given area over time. Also see "Fire regime".

TERM	ABBREVIATION	DESCRIPTION
Fire front		The part of a fire within which continuous flaming combustion occurs. Unless otherwise specified, the fire front is assumed to be the leading edge of the fire perimeter. In ground fires, the fire front may be mainly smouldering combustion.
Fire hazard		A fuel complex defined by volume, type, condition, arrangement and location, which determines the degree of ease of ignition and of resistance to control.
Fire hydrant		A valve-type connection on a piped water supply system, having one or more outlets that is/are used to supply hose and fire department pumpers with water.
Fire incidence		The statistical occurrence of fire in a specified geographical area.
Fire intensity (also, Frontal		The rate of energy release per unit length of fire front, usually expressed in kilowatts per metre (Kw/m) (AFAC).
fire intensity)		The rate of energy release per unit length of fire front, defined by the equation:
		I = Hwr, where
		I = fireline intensity (kW/m)
		H = heat yield of fuel (kJ/kg)-16,000 kJ/kg
		w = dry weight of fuel consumed (kg/m2) (mean total less mean unburnt)
		r = forward rate of spread (m/s)
		The equation can be simplified to:
		I = w r/2 where
		I = fireline intensity (kW/m)
		w = dry weight of fuel consumed (tonnes/ha)
		r = forward rate of spread (km/h).
Fire line		Fire line is the term used to define the actively burning wall of fire or flames on the edge of an advancing veldfire.
Fire management		All activities associated with the management of fire-prone land, including the use of fire to meet land-management goals and objectives.
Fire Management Plan		A fire management plan contains concise information on the fire risk and resources in an area, along with strategic and operational information to support informed decision-making.
Fire Management Unit	FMU	A localised area in which Integrated Fire Management efforts between individual landowners can be most effectively coordinated.
Fire preparedness		All activities undertaken in anticipation of and in advance of wildfire occurrence to decrease its extent and severity and to ensure more effective fire suppression.

TERM	ABBREVIATION	DESCRIPTION
Fire prevention		Activities, including education, engineering, enforcement, and administration that are directed at reducing the number of wildfires (particularly those of human origin), the costs of suppression and fire-caused damage to resources and property.
Fire protection		The actions taken to limit the adverse environmental, social, political, and economic effects of fire.
Fire Protection Association	FPA	An association formed for the purpose of predicting, preventing, managing, and extinguishing wildfires, established in terms of section 3(1) and registered in terms of the NVFFA.
Fire Protection Officer	FPO	A person, referred to in sections 5 and 6 of the NVFFA, who is appointed and empowered in terms of the NVFFA to administer an FPA and perform specifically prescribed functions in relation to fire management.
Fire regime		Periods and patterns of naturally occurring fires in a particular area or vegetation type, described in terms of frequency, biological severity, and area extent. For example, frequent, low-intensity surface fires occur in the grasslands on a 1–2 year rotation, while, in the fynbos of the Western Cape, high-intensity fires should occur on a rotation ranging from 10–30 years, depending on the fynbos type.
Fire retardant		Any substance, except water, that by chemical or physical action reduces flammability of fuels or slows their rate of combustion.
Fire risk		Fire risk is determined by assessing, firstly, the likelihood of a wildfire occurring at any given place and, secondly, the consequences should this happen.
Fire risk scenario		A particular fire-hazard scenario, relevant to one or more fire ecotypes, defined to represent the plausible, normative fire risk, and defined in terms of cause, season, fuel conditions, weather, fire behaviour and potential consequence.
Fire season		The periods during which wildfires are likely to occur, spread and do sufficient damage to warrant organised fire control. Typically, the fire season in the northern and eastern reaches of South Africa is during the dry winter months, while in the Western Cape the fire season is during the hot and dry summer months.
Fire severity		The degree to which a fire is destructive of life, property, or the environment. This is usually a function of the duration (residence time) of a fire and its intensity.
Fire service		A fire brigade of a local authority or a fire fighting unit, designated as such by the Minister.
Fire storm		Violent convection caused by a large, continuous area of intense wildfire, often characterised by destructively-violent surface in draughts, a towering convection column, long-distance spotting, and sometimes, by tornado-like whirlwinds.
Fire suppressant		Any agent used to extinguish the flaming and glowing phases of combustion, by direct application to the burning fuel.
Fire tender		A specialised vehicle capable of bringing water, foam or dry chemicals to fire trucks in the field that are engaged on the fire line.

TERM	ABBREVIATION	DESCRIPTION
Fire triangle		Instructional aid in which the sides of a triangle are used to represent the three factors necessary for combustion and flame production - oxygen, heat, and fuel. Removal of any of the three factors causes flame production to cease, i.e. the fire to be extinguished.
Fire weather		Weather conditions that influence fire ignition, behaviour and suppression.
Fire whirl		Spinning vortex column of ascending hot air and gases rising from a fire and carrying aloft smoke, debris and flame. Fire whirls range in size from less than half a metre to over 140m in diameter. Large fire whirls have the intensity of a small tornado.
Firebreak		A natural or man-made change in fuel characteristics which affects fire behaviour so that fires burning into them can be more readily stopped or checked, or provides a control line from which to work. Under favourable conditions an adequate firebreak may stop a fire. However, under adverse fire conditions, it is a place to gain access to fight the fire indirectly through methods such as burnout and back burning.
		Chapter 4 of the NVFFA provides that a firebreak:
		is wide enough and long enough to have a reasonable chance of preventing a wildfire from spreading to or from neighbouring land;
		does not cause soil erosion; and
		is reasonably free of flammable material capable of carrying a wildfire across it.
		A very practical judge of width under normal conditions is 1.5 – 2 times the width of the highest fuel, immediately adjacent to the break. This comes from the scientific fact that when combustible material burns it releases gases that cause a flame height of 1.5 to 2 times the height of the fuel. This flame can be blown flat, hence the width factor. This does not take into account the fire spotting.
Fire ecology type		A class of vegetation types that is relatively uniform in terms of the fire regimes within the constituent vegetation types.
Fire-proofing		Removing or treating fuel with fire retardant to reduce the danger of fires igniting or spreading (e.g. fire-proofing roadsides, campsites or structural timber). Protection is relative, not absolute.
Firewise construction		The use of materials and systems in the design and construction of a building or structure to safeguard against the spread of fire within a building or structure, and the spread of fire to or from buildings or structures to the Wildland-Urban Interface area.
Firewise landscaping		Vegetative management that removes flammable fuels from around a structure to reduce exposure to radiant heat. The flammable fuels may be replaced with green lawn, gardens, certain individually spaced green ornamental shrubs, individually spaced and pruned trees, decorative stone or other non-flammable or flame-resistant materials.
Flame		A mass of gas undergoing rapid combustion, generally accompanied by evolution of sensible heat and incandescence.

TERM	ABBREVIATION	DESCRIPTION
Flame length		The distance between the flame tip and the midpoint of the flame depth at the base of the flame (generally the ground surface); an indicator of fire intensity.
Flammability		The relative ease with which fuels ignite and burn, regardless of the quantity of the fuels.
Flammable		Capable of being ignited and of burning with a flame.
Fire Management Unit leader	FMU leader	Leadership chosen by members of that FMU. They represent members in their areas regarding FPA matters.
Foam		The aerated solution created by forcing air into or entraining air in water containing a foam concentrate, by means of suitably-designed equipment, or by cascading it through the air at a high velocity. Foam reduces combustion by cooling, moistening and excluding oxygen.
Forest		An area, incorporating all living and non-living components, that is dominated by trees, having usually a single stem and a mature or potentially mature stand height exceeding 2m, and with existing or potential crown cover of overstorey strata about equal to or greater than 20%. This definition includes South Africa's diverse native forests, woodlands and plantations, regardless of age (see National Forests Act).
Forest fire		A fire burning mainly in forest and/or woodland.
Forward rate of spread	FROS	The speed with which a head fire moves in a horizontal direction across the landscape.
Fuel		Combustible material including vegetation and structures. Fuel can include everything from trees, underbrush and dry grassy fields to homes. Related terms include: available fuel, coarse fuel, dead fuel, ground fuel, elevated dead fuel, fine fuel, ladder fuels, surface fuels and total fine fuel.
Fuel age		The period of time that has lapsed since the fuel was last burnt.
Fuel break		An area, strategically located for the fighting of anticipated fires, where the native vegetation has been permanently modified or replaced so that fires burning into it can be more easily controlled. Fuel breaks divide fire-prone areas into smaller areas for easier fire control and to provide access for fire fighting.
Fuel condition		Relative flammability of fuel as determined by fuel type and environmental conditions.
Fuel load		The volume of fuel in a given area (the oven dry weight) per unit area. Generally expressed in tons per acre. (Also known as fuel loading)
Fuel modification		Any manipulation or removal of fuels to reduce the likelihood of ignition or the resistance to fire control.
Fuel moisture content		The water content of a fuel expressed as a percent of the oven dry weight of the fuel particle (% ODW).

TERM	ABBREVIATION	DESCRIPTION
Fuel reduction		Manipulation, including combustion, or removal of fuels to reduce the likelihood of ignition and/or to lessen potential damage and resistance to control.
Fuel reduction burning		The planned application of fire to reduce hazardous fuel quantities, undertaken in prescribed environmental conditions within defined boundaries.
Greenbelt		A fuel break designated for use other than fire protection.
Ground fire		A fire that is burning below the surface of the ground in roots, peat, coal, decaying plant material etc.
Ground fuels		All combustible materials located on the ground that typically supports combustion such as grass, duff, loose surface litter, tree or shrub roots, rotting wood, leaves, peat, or sawdust.
Hazard		(1) A source of potential harm or a situation with potential to cause loss.
		(2) The degree of flammability of the fuels once a fire starts. This includes the fuel (type, arrangement, volume, and condition), topography and weather.
Hazard reduction		Any treatment of living and dead fuels that reduces the threat of ignition and spread of fire.
Hazardous areas		Those uncontrolled wildfire areas where the combination of vegetation, topography, weather and the threat of fire to life and property create difficult and dangerous problems.
Heavy fuels		Combustible material with a diameter between your wrist and your thigh. This material needs sustained heat to ignite, e.g. big logs. Also called 100-hour fuels because, under ideal conditions, they get saturated or dry within 100 hours. There is another heavy fuel type categorised as a 1 000-hour fuel. These are any fuels bigger than your thigh, e.g. large downed trees.
Horizontal fuel		Combustible material that is lying down horizontally.
Human-caused fire		Any fire caused directly or indirectly by a person.
Humus		Layer of decomposed organic matter on the forest floor, beneath the fermentation layer and directly above the soil. It is that part of the duff in which decomposition has rendered vegetation unrecognisable and mixing of soil and organic matter is underway.
Hydrant		A discharge pipe with three valves and fittings at which water can be drawn from a water main or other source, for the purpose of fighting fires.
Ignition		The beginning of flame production or smouldering combustion; where rapid oxidation occurs and self-sustained combustion occurs.
Ignition probability		Chance that a firebrand will cause an ignition when it lands on receptive fuels.
Ignition source		A source of energy sufficient to initiate combustion.
Ignition time		The time between the application of an ignition source to a fuel and when the fuel reaches self-sustained combustion.

190 FYNBOSFIRE ®

TERM	ABBREVIATION	DESCRIPTION
Incident		In this context it refers to a fire.
Incident Command System	ICS	An emergency management tool, used at incidents by all types and levels of emergency services, to ensure standardisation and efficiency, and that:
		is adaptable and scalable to any type or size of event;
		is suitable for use regardless of jurisdictions or agencies involved;
		employs a common organisation structure;
		utilises common communication and structures and consolidated action planning; and
		utilises common terminology.
Incident Commander	IC	The person in charge of the fire or incident.
Indirect attack		A method of suppression in which a control line is located some considerable distance away from the fire's active edge. Generally done in the case of a fast-spreading or high-intensity fire and utilising natural or constructed firebreaks, fuel breaks and favourable breaks in the topography. The intervening fuel is usually burnt out, but occasionally, depending on conditions, the main fire is allowed to burn to the control line.
Initial attack		The actions taken by the first resources on arrival at a wildfire to protect lives and property and to prevent further spread of the fire. Usually done by small, fast acting and localised teams with limited resources, and takes place immediately after size-up. The motto is 'hit hard and hit fast'.
Integrated Fire Management	IFM	The holistic and systematic approach to the management of wildfires, which seeks to combine all stakeholders and the various management efforts into a single, albeit diversified, strategy.
King Report on Corporate Governance	King	A groundbreaking code of corporate governance in South Africa issued by the King Committee on Corporate Governance. Three reports were issued in 1994 (King I), 2002 (King II) and 2009 (King III). Compliance with the King Reports is a requirement for companies listed on the Johannesburg Stock Exchange.
Kloof		Ravine, or deep narrow valley.
Ladder fuels		Fuels that provide vertical continuity allowing fire to climb from surface fuels into the crowns of trees or shrubs with relative ease. They can also lead fires from garden vegetation to structural roofs.
Light fuels		Combustible material with a diameter of less than a thumb. It ignites very easily but does not burn for a long time, e.g. grass. Also called 1-hour fuels because, under ideal conditions, they get saturated or dry within one hour.
Live fuels		Living matter burns. A living plant under drought and heat stress can have less moisture content than a dead plant that has fully turgid cells. Live fuel moisture content is governed more by the health of the plant than by the atmosphere, but they are linked.

TERM	ABBREVIATION	DESCRIPTION
Medium fuels		Combustible material with a diameter of between thumb and wrist thick. It ignites with sustained heat and burns for longer than grass, e.g. twigs and branches. Also called 10-hour fuels because, under ideal conditions, they get saturated or dry within 10 hours.
Mega-fires		A wildfire or concurrent series of wildfires that is in the upper percentile of the fire regime.
Member		A natural or legal person that has registered with an FPA and has paid up membership fees.
Mitigation		Any risk management measure or action that moderates the severity of a fire hazard or reduces risk, including fuel-reduction burning, other prevention measures, and preparedness, etc.
Mountain catchment area		A mountainous region assigned specific protection in terms of the Mountain Catchment Areas Act (Act 63, of 1970), with the intention of ensuring a sustained yield of high-quality water throughout the year.
National Fire Danger Rating System	NFDRS	A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels.
National Umbrella Fire Protection Association	NUFPA	Committee representing all FPAs and UFPAs on a national level, established to provide guidance, input and the opportunity to share best practices to all member FPAs and UFPAs.
National Veld and Forest Fire Act 101 of 1998	NVFFA	This Act governs FPAs and identifies landowner responsibilities in terms of fire prevention.
Natural barrier		Any area where lack of flammable materials or physical constraints limit the spread of a fire.
Non-combustible		A material that, in the form in which it is used and under the conditions anticipated, will not aid combustion or add appreciable heat to an ambient fire.
Non-natural deaths		All deaths that were not due to, or may not have been due to, natural causes and that in terms of the Inquests Act are subject to medico-legal investigation.
North-facing slope		In the southern hemisphere the north-facing slopes receive extended direct sunlight. As a result, the slope is inherently dryer and the vegetation is generally made up of light fuels more inclined to flash fire.
Open burning		Burning of wastes in the open or in an open dump.
Out of control fire		A fire that has reached the intensity where no attempt is or can be made to stop the head of the fire with a direct attack. Only the flanks can be attacked.
Overstorey		The portion of the trees in a forest that form the upper or uppermost layer.

TERM	ABBREVIATION	DESCRIPTION
Parallel attack		When the fire line is too hot for the firefighters to safely attack the flames directly, generally occurring when the flames are higher than 1.8m. Firefighters then, generally, move back to a safe distance, $\pm 10$ m off the flank, and prepare a containment line from which to fight the fire. Parallel attack typically includes burning out the fuel between the containment line and the fire.
Peak fire season		The period of the fire season during which fires are expected to ignite most readily, to burn with greater than average intensity, and to create damages at an unacceptable level.
Plantation		A stand of trees or bushes planted and cultivated in rows, at even spaces.
Point of ignition or Fire origin		The place where a fire was started or ignited.
Preparedness		All activities undertaken in advance of the occurrence of an incident to decrease the impact, extent and severity of the incident, to ensure more effective response activities, to recognise changes in fire danger, and to act promptly when action is appropriate.
Prescribed burn		A fire utilised for prescribed burning.
Prescribed burning		The controlled application of fire, under specified environmental conditions, to a predetermined area and at the time, intensity, and rate of spread required to achieve planned resource management objectives. Generally, it requires the specific authorisation of the fire management authority.
Prescribed fire		Any fire ignited by management or on the instructions of management to meet specific objectives. A written, approved burn plan must exist, and approving agency requirements (where applicable) must be met, prior to ignition.
Prevention		All activities concerned with minimising the occurrence of incidents, particularly those of human origin.
Probability		A measure of the chance of occurrence expressed as a number between 0 and 1, for a specified time period, and linked to asset of conditions.
Rate of spread	ROS	The speed with which a fire moves in a horizontal direction across the landscape, at a specified part of the fire perimeter. (See also Forward rate of spread.)
Reaction time		The time taken between the report of a fire or incident and the departure of the crew.
Recovery		The coordinated process of supporting emergency-affected communities in reconstruction of the physical infrastructure, and restoration of emotional, social, economic, and physical wellbeing.
Residual risk		The risk that remains in unmanaged form, even when effective, disaster risk-reduction measures are in place, and for which emergency response and recovery capacities must be maintained.
Resilience		The capacity of an ecosystem to recover after disturbance.

TERM	ABBREVIATION	DESCRIPTION			
Response		Actions taken in anticipation of, during and immediately after an incident, to ensure that its effects are minimised, and that people affected are given immediate relief and support.			
Retardant		A substance or chemical agent that reduces the flammability of combustible material.			
Risk		The exposure to the possibility of such things as economic or financial loss or gain, physical damage, injury or delay, as a consequence of pursuing a particular course of action. The concept of risk has two elements, i.e. the likelihood of something happening and the consequences if it happens.			
Risk analysis		A systematic use of available information to determine how often specific events may occur, and the magnitude of their likely consequences.			
Risk assessment		The overall process of risk identification, risk analysis and risk evaluation.			
Risk evaluation		Process of comparing the level of risk against risk criteria.			
Risk factor		An underlying, natural or human cause of a given level of risk.			
Risk identification		The process of determining what, where, when, why and how something could happen.			
Risk management		The culture, processes and structures that are directed towards realising potential opportunities, while managing adverse effects. Application of available resources in such a way that overall risk is minimised.			
Risk management framework		Set of elements of an organisation's management system concerned with managing risk.			
Risk management process		The systematic application of management policies, procedures and practices to the tasks of communicating, establishing the context, identifying, analysing, evaluating, treating, monitoring and reviewing risk.			
Risk mitigation		An alternate expression for risk reduction.			
Risk reduction		Actions taken to lessen the likelihood, negative consequences, or both, associated with a risk.			
Rural		Any area where residences and other developments are scattered and intermingled with forest, range or farm land and native vegetation, or cultivated crops.			
Slope		The variation of terrain from the horizontal, expressed either as a gradient 1 in 20, i.e. a 1m rise in 20 metres, or as a percentage, or as an angle where horizontal represents $0^{\circ}$ and vertical $90^{\circ}$ .			
Smoke		(1) The visible products of combustion rising above a fire.			
		(2) Term used when reporting a fire or probable fire in its initial stages.			

194 FYNBOSFIRE ®

TERM	ABBREVIATION	DESCRIPTION
South-facing slope		In the southern hemisphere the south-facing slope is inherently wetter, as it does not get directly exposed to the sun, and the vegetation is dominated by multi-story, closed canopy natural forests and denser vegetation types.
Specific risk scenario		A written description of the specific risk, which contains all the necessary information to make a justifiable risk evaluation, described in a way that is meaningful and unambiguous.
Spot fire		An isolated fire started ahead of the main fire by sparks, embers or other ignited material; sometimes at a distance of several kilometres.
Spotting		Behaviour of a fire producing sparks or embers that are then carried by the wind and start new fires beyond the zone of direct ignition of the main fire, and which serve as independent ignition points. They often greatly increase the rate at which a fire spreads. Short range spotting, of less than 500m, can occur in any fuels and is more likely when the relative humidity is below 40%, and is almost certain when the relative humidity reaches 25% or less. In addition, air temperatures above 16°C (60°F) and wind speeds over 32km/h (20mph) significantly increase the chance of firebrand ignitions.
Structural fire protection		The protection of a structure from interior and exterior fire ignition sources. This fire protection service is normally provided by municipal fire departments with trained and equipped personnel. After life safety, the agency's priority is to keep the fire from leaving the structure of origin or to protect the structure from an advancing uncontrolled wildfire. (The equipment and training required to conduct structural fire protection is not normally provided to the uncontrolled veld firefighter.) Various taxing authorities fund this service.
Structural fire		A fire originating in, or burning any part or all of, a building or shelter.
Suppression		Efforts to actively fight a fire, contain it, or extinguish it.
Surface fire		Fire that moves through combustible material located on the ground.
Surface fuel		Fuels lying on or near the surface of the ground, consisting of leaf and needle litter, dead branch material, downed logs, bark, tree cones and low-stature living plants.
Survivable space		The characteristics of a home such as its materials and design, as well as the flammable materials in its immediate surroundings, that results in high ignition resistance from flames and firebrands (burning embers). Survivable space characteristics relate to the ignitability of a home, without necessarily including the higher thermal vulnerability of firefighters.
Tracer		Access line, generally with little or no combustible material, from which to start a burn.
Tree crown		The primary and secondary branches growing out from the main stem, together with twigs and foliage.

TERM	ABBREVIATION	DESCRIPTION	
Umbrella Fire Protection Association	UFPA	An umbrella association may be established for a number of fire protection associations that may exercise powers under NVFFA or perform duties in terms of this Act on behalf of a fire protection association, if the Minister agrees.	
Uncontrolled fire		Any fire that threatens to destroy life, property, or natural resources and (a) is not burning within the confines of firebreaks, or (b) is burning with such intensity that it could not be readily extinguished with ordinary, commonly available tools.	
Understorey		Low-growing vegetation (herbaceous, brush or reproduction), growing under a stand of trees. Also, that portion of trees in a forest stands below the overstorey.	
Unintentional injury, deaths		Includes all other unintentional, non-transport injuries such as those due to burns, falls, poisoning and drowning.	
Urban interface		Any area where wildfire fuels threaten to ignite combustible homes and structures.	
Values at risk		The natural resources or an improvement that may be jeopardised if a fire occurs.	
Veld		Undeveloped and uncultivated area of natural vegetation.	
Veldfire		Described in the NVFFA as "a veld, forest or mountain fire". A vegetation fire outside the urban-rural interface; a general term to describe fire in vegetation. In this context these forms of fire are collectively referred to as "wildfires".	
Vertical fuel		Combustible material that has a vertical profile, including material that is standing up.	
Volunteer firefighter		A legally enrolled and trained firefighter under the fire department organisation laws who devotes time and energy to community fire service, without compensation other than workers' compensation or other similar death and injury benefits.	
Vulnerability		The characteristics and circumstances of a community, system or asset that make it susceptible to the damaging effects of a hazard.	
Water supply		A source of water for fire fighting activities.	
Wildfire		A vegetation fire accidently igniting or deliberately ignited, but burning out of control, including veld and forest fires.	
Wildland fire		A fire burning outside the urban areas, either as a prescribed burn or as a wildfire.	
Wildland Urban Interface	WUI	The line, area or zone where structures and other human development adjoin or overlap with undeveloped natural areas.	
Wind Direction		The cardinal point from where the wind originates, i.e. a northwester or north-westerly wind comes from the north west but flows in a south-easterly direction.	
Wind speed descriptions		See "Beaufort Scale".	
Working on Fire	WoF	An Extended Public Works Programme providing trained firefighters and fire management services.	

196 FYNBOSFIRE

Please note that the documents attached are intended as guidelines only and are not prescriptive in any way. The versions of documents were relevant at the time of publication and any person using the document must verify that they are referencing the most recent version. The documents and planning processes may differ among the various organisations.

### **CONTENTS**

Tool 1:	Integrated Fire Management Roles	T2
Setting (	р	
Tool 2:	FPA Model Constitution	T4
Tool 3:	FPA Rules	T12
Tool 4:	Proforma Membership Application Form	T 18
Tool 5:	Guidelines to Assess Form 1 - Application to Register an FPA	T20
Tool 6:	Application for Registration of an FPA [Form 1]	T24
Tool 7:	Application for Registration of an FPA and FPO [Form 2]	T28
Tool 8:	Application for Change in the Boundaries of an FPA [Form 3]	T36
Tool 9:	Notification of a Change in Membership of the Executive Committee of an FPA [Form 4] .	T38
Tool 10:	Notification of the Appointment of a New FPO [Form 5]	T40
Funding		
Tool 11:	Grant-In-Aid Agreement	T43
Tool 12:	Motivation for Financial Assistance to Municipality	T48
Tool 13:	Fire Management Unit Planning Template	T50
Tool 14:	Bilateral Landowner Agreement	T52
Tool 15:	Multiple Landowner Agreement	T57
Tool 16:	Firebreak Exemption Application (Individuals)	T64
Tool 17:	Firebreak Exemption Application (Groups)	T70
Tool 18:	Firebreak Guidelines	T79
Tool 19:	Burning Permit Application for Prescribed Burning	T80
Tool 20:	Burn Inspection Report	T82
Tool 21:	Smoke Report	T86
Suppres	sion	
Tool 22:	Western Cape Standardised Incident Command Form	T92
Tool 23:	Mou for Aerial Request for Assistance	T107
Reports		
Tool 24:	FPA Audit Form & Progress Checklist	T108
Tool 25:	FPA Member Assessment Form	. T114
Complia	nce	
Tool 26:	Non-Compliance Notice	T116
Tool 27:	Determination for the Admission of Guilt Fines	T118



### TOOL 1: INTEGRATED FIRE MANAGEMENT ROLES

The table below provides an overview of the functions and the respective roles and responsibilities of each stakeholder. Roles include project driver, support and informant. In the event that a stakeholder does not have the capacity (human or financial) to execute their role this can be delegated to another stakeholder.

Role	FPA	FMU	Land- owner	District & local Fire Services	WOF	Disaster Manage- ment	DAFF	Government Departments
Risk mapping	1		1				<u> </u>	
Mapping of members	Driver	Support	Informant	-	-	-	-	-
Collection of other landowner information	Support	Driver	Informant	-	-	-	-	-
Translation of information on QGIS (FOSS)	Driver	-	-	-	-	-	-	-
Add layers to GIS with veld type, veld age, burn history, DM risk assessment, human and social, economic, ecological, etc.	Driver	-	-	Support	Support	Support	-	-
Standardise risk ratings	Support	-	-	-	Support	Support	Driver	-
Apply rating to data – expert or participatory	Driver	Support	Informant	Support	-	Support	-	-
Stakeholder organisation a	nd commur	nication						
Identification of relevant stakeholders	Driver 1	Informant	Informant	Support		Support	Support	Support
Mobilisation of private landowners into FPA	Driver 2	Driver 1	Support	Support	-	-	Support	Support
Mobilisation of state landowners into FPA	Driver	-	-	Support	Support	Support	Support	Support
Mobilisation of parastatals and servitude holders	Driver	-	-	Support	Support	Support	Support	Support
Mobilising local municipalities	Driver	-	-	Support	Support	Support	Support	Support
Guidelines for prioritising stakeholders – willingness, risk rating	Driver	Support	-	_	Support	-	-	-
Fire awareness information dissemination	Driver	Support	-	Support	Support	-	-	-
Database of service providers to support members	Driver	Informant	Informant	Support	-	Informant	-	-
Fire management planning	- protectio	n, preventio	n and suppr	ession				
Strategic: high level linked to risk mapping – annual review	Driver	Informant	-	Support	-	Informant	Support	-
Set minimum standards for fire prevention and readiness for members	Driver	Informant	Informant	Support	Support	Support	Support	Support
Risk reduction plan: fire belts – strategic and tactical, fuel load reduction – alien clearing, resource mobilisation	Support	Driver 2	Driver 1	Support	Support	Support	Support	Support

Role	FPA	FMU	Land- owner	District & local Fire Services	WOF	Disaster Manage- ment	DAFF	Government Departments
Controlled burns	Support	Support	Driver	Support	Support	-	-	-
Tactical: Local planning – FMU and landowner	Support	Driver 2	Driver 1	Support	Support	Support	-	-
Communication of fire danger rating	Driver	-	-	Support	Support	Support	-	-
Agree mechanisms for coordination of actions with adjoining FPAs	Driver	-	-	Support	Support	Support	-	-
Fire fighting resource identification and deployment plan	Informant	-	Support	Driver	Support	Driver if disaster	-	-
Pre fire season planning and post fire season debrief	Driver 1	Support	Support	Support	Support	Driver 2	-	-
Communication plan: awareness and operational	Driver	Support	-	Support	Support	Support	Support	Support
Detection and suppression								
Detection systems: landowner, AFIS, other	Driver 1	-	Support	Support	Driver 2	Support/ Driver	-	-
Reporting of fires: emergency number, system	Driver 2	-	-	Driver 1	-	Driver 1 (emergen- cies)		
Suppression plan	Support	Support	Driver 1	Driver 2	Support	Driver 3 (emergen- cies)	-	-
SOP and incident control: provincial standard to be applied for typing of incidents and resources	-	-	-	Driver 1	Support	Driver 1 (emergen- cies)	-	-
Handling of emergencies	-	-	-	Support	-	Driver	-	-
Training	Driver	-	-	Support	Support	-	-	-
Post incident debriefing and record-keeping / statistics	Driver 2	Informant	Informant	Driver 1	Support	Driver 1 (emergen- cies)	-	-
Rehabilitation								
Land rehabilitation	-	-	Driver	-	-	-	-	Support
Mobilisation of resources	Support	-	Driver	-	Support	-	-	Support
Reporting	Driver	Support	Informant	-	-	-	-	Support
Record-keeping and Monito	oring & Evalu	ıation						
Database: title deed	Driver	Informant	Informant	Support	-	-	-	-
Live membership database	Driver	Informant	Informant	Support	-	-	-	-
Fire statistics collation	Driver	Informant	Informant	Support	Support	Support	-	-
Contact directory	Driver	Informant	Informant	Support	Support	Support	-	-

# [NAME]

### FIRE PROTECTION ASSOCIATION

# **CONSTITUTION** [DATE]

Tab	ole of Contents	Page
1.	Name of the Association	2
2.	Body Corporate	2
3.	Area of the Association	2
4.	The Address of the Association	2
5.	Application of the Act to this Constitution	2
6.	The Objectives of the Association	2
7.	Duties and Functions of the Association	3
8.	Membership	3
9.	Membership Database and Communication	3
10.	Responsibilities of Members	3
11.	Termination of Membership	4
12.	Income and Assets	4
13.	Fees, Charges and Interest	4
14.	Liability of Members	5
15.	The Structure of the Association	5
16.	Finances	7
17.	Annual General Meeting	7
18.	Special General Meeting	7
19.	Voting	8
20.	Dissolution	8
21.	Dispute resolution	8
22	Doclaration	Ω

### 1. Name of the Association

a. The name of the Association is: [NAME] FIRE PROTECTION ASSOCIATION

herein referred to as "the Association".

b. The Association will henceforth trade under the following name: [NAME] FIRE PROTECTION ASSOCIATION

- c. Upon approval by the department responsible for the administration of the National Veld and Forest Fire Act, the name of the Association will change to [NAME] Fire Protection Association;
- d. The shortened name will be "[FPA]".

### 2. Body Corporate

- a. The Association shall exist in its own right, separately from its members, and will continue to exist even if membership or office bearers are amended.
- b. The Association will be able to own property, capital or other assets, and will be able to sue and be sued in its own name.

### 3. Area of the Association

- a. The domain of the Association falls principally within the [NAME] District Municipal boundaries1.
- b. The general boundaries of the Association are described in Annexure A.
- c. The land use in the domain includes rural commercialised agricultural properties (commercialised and non-commercialised), rural communally owned properties, large mountainous conservation areas managed by conservation authorities and by private land owners, urban areas managed by local authorities, and other state land managed by various government departments.
- d. The Association is divided into Management Units, according to geographical areas.

### 4. The Address of the Association

a. The postal address of the Association is:

[NAME] Fire Protection Association [POSTAL ADDRESS]

b. The physical address of the Association is:

[PHYSICAL ADDRESS]

c. The electronic correspondence address of the Association is:

[EMAIL ADDRESS]

### 5. Application of the Act to this Constitution

a. This constitution must adhere to Chapter 2 of the National Veld and Forest Fire Act (No.101 of 1998) (the Act) and the regulations promulgated thereto.

### 6. The Objectives of the Association

- a. The primary objective of the Association is to provide a community driven Integrated Fire Management service to members of the Association; and
- b. The secondary objectives of the Association are to:
  - i. Predict, prevent and assist with wildfires, where possible;
  - ii. Assist members to comply with the Act, the regulations made in terms of the Act, this constitution and rules,
  - iii. Improve the knowledge base for the implementation of Integrated Fire Management strategies;
  - iv. Improve awareness on Integrated Fire Management and prevention; and
  - Reduce fire risk associated with the occurrence of wildfires by devising Integrated Fire Management plans.

### 7. Duties and Functions of the Association

- a. The duties and functions of the Association are to:
  - i. Develop and implement a veldfire management strategy for the area;
  - ii. Make rules that will bind members;
  - Regularly communicate the fire danger rating referred to in sections 9 and 10 of the Act to its members;
  - iv. Organise and train its members in fire fighting, management and prevention;
  - v. Inform its members of equipment and technology available for preventing and fighting veldfires;

<sup>1</sup> The boundary of the FPA should correspond with local or district municipal boundaries

- vi. Annually provide the Minister with statistics about veldfires within the Association;
- vii. Provide any information requested by the Minister in order to prepare or maintain the fire danger rating system;
- viii. Assist members to prepare applications for exemption from the duty to prepare and maintain firebreaks in terms of Section 15 of the Act;
- ix. Carry out the powers and duties passed on to it by the Minister;
- x. Appoint personnel to ensure compliance to the Act and to improve management capacity within the Association;
- xi. Provide fire fighting resources to members at a fee, when available;
- xii. When possible, provide technical support and information to members. This would include instances where insurance claims are being investigated; and
- xiii. Where appropriate, conclude agreements with adjoining Fire Protection Associations relating to matters of common interest and collaboration.

### 8. Membership

- a. All landowners as defined by the Act and within the domain of the Association can become members.
- b. All landowners, lessees, state entities, municipalities, or communities, are members provided that:
  - i. they have applied for membership and completed and submitted membership application forms; and
  - ii. they have paid their membership fees. The membership of any existing member will automatically lapse if they are in arrears with the payment of their membership fees.
- c. If any member of the Board (EC) objects to any applicant's admission as a member or any member's continued membership, the Board must, within fourteen (14) days:
  - i. give the applicant or member written reasons for the objection;
  - ii. consider application at the next Board meeting; and
  - iii. notify the applicant or member of the date, time and place of the meeting.
- d. The applicant or member has the right:
  - i. to speak at the meeting and argue for admission or continued membership; and
  - ii. to make a complaint to the Minister if not satisfied with the Board's decision.

### 9. Membership Database and Communication

- a. Every new member must provide the FPA General Manager and the Manager of the Fire Management Unit within which their property is located with a fully completed and signed application form in order to ensure that the correct information is available for the database.
- b. Every member must inform the FPA General Manager and the Manager of the Fire Management Unit within which their property is located of any change of address, telephone number, e-mail address or transfer of property, within two weeks.
- c. The FPA General Manager or any other designated employee must keep all the details referred to in sub-paragraphs (1) and (2), and other relevant information, in a Register of Members.

### 10. Responsibilities of Members

- a. Members of the Association are responsible to:
  - follow this constitution, the rules of the Association and the rules of the Fire Management Unit in which their property is located;
  - ii. adhere to guidelines and management practices that may be determined by the Association;
  - iii. commit themselves to the implementation of a fire management plan where such plans exist;
  - iv. pay any fees and charges as set by the Association from time to time;
  - actively involve and participate in activities and capacity building programmes offered by the Association; and
  - vi. comply with the requirements of the National Veld and Forest Fire Act, particularly in relation to the establishment of firebreaks, the reduction of fuel loads, the retention of fire fighting equipment and staff, and preventing the starting of fires on their land or the spread to adjoining land.

### 11. Termination of Membership

- a. A member may terminate his or her membership by written notice to the FPA General Manager, or when selling the property.
- b. If a member terminates membership, he or she gives up all fees and charges already paid, and remains liable for any outstanding monies to the Association.
- c. Membership is automatically terminated if a member does not pay his/her membership fees within three months after the start of the financial year of the FPA and receipt of invoice.
- d. A person whose membership has automatically terminated due to non-payment of membership fees, who subsequently seeks to reinstate their membership, will be required to again pay the once-off joining fee.
- e. The property of a member who dies will still be protected under this Constitution if:
  - i. on his or her death, the fees, charges and interest are fully paid; or
  - ii. his or her successor-in-title applies for registration.
- f. The association may terminate membership of any member who fails to comply with the rules after receiving a notice of failure to comply with an agreed rectification plan from the Fire Protection Officer.

### 12. Income and Assets

- a. The Association will keep a record of all assets and procurements and will not give or donate any funds or property to its members or office bearers, except if such person or office bearer has been in service of the Association and is paid in accordance with such duties. A member may only be reimbursed for any expenses if he/she has paid for such expenses in line with his/her duties.
- b. Members or office bearers will have no vested rights over any assets belonging to the Association.

### 13. Fees, Charges and Interest

- a. The Board will annually determine and, at the Annual General Meeting, approve a budget for the forthcoming year.
- b. The Board will from time to time:
  - determine fees and charges for membership and services that are necessary for the proper management of the Association; and
  - ii. charge interest on unpaid fees that will be calculated according to rates of financial institutions applicable at that time.
- c. The fees of the Association are:
  - a once off joining fee, in an amount determined at an Annual General Meeting, regardless of the size of the land;
  - ii. annual fees based on a rate determined at the last Annual General Meeting;
  - iii. any other fee that may be charged for any other services and resources provided by the Association; and
  - iv. any annual or once-off levy imposed by the Fire Management Unit.
- d. Annual membership fees must be paid within 90 days of the start of the financial year.
- e. If membership fees are not paid timeously, membership will automatically lapse and a lapsed member will be required to again pay the joining fee in order to restore membership.
- f. If a member should die, their successor-in-title shall not be liable for the payment of the once-off joining fees, provided that the membership of the deceased has not lapsed.
- g. Any increase in registration and membership fees must:
  - i. be approved at an Annual General Meeting by the majority of voting members present; or
  - ii. if not done at an Annual General Meeting, be approved by the majority of voting members present at a special general meeting called for that purpose.
- h. Notwithstanding the above, provided that they meet the total membership fee contribution budgeted by the Board for the members of a Fire Management Unit, members of that Fire Management Unit may determine an alternative fee structure for their members.
- i. Any annual or once-off levy relating to a Fire Management Unit must:
  - i. be decided by the majority of members of that Fire Management Unit present at a meeting called

- for that purpose and approved at the Annual General Meeting, or at a special general meeting called for that purpose; and
- ii. The basis of fee calculation must be included in the proposal that is put forward at an Annual General Meeting.
- j. All levies must be paid directly to the Association unless otherwise agreed between the Association and the majority of the members of a Fire Management Unit.

### 14. Liability of Members

- a. Members are not individually liable for any debts or duties owed by the Association.
- b. Members are liable for unpaid fees and charges and interest thereon.

### 15. The Structure of the Association

- a. The Association will consist of the following bodies:
  - i. The Board
  - ii. The Advisory Forum
  - iii. The Management Oversight Committee
  - iv. The Management Team
  - v. Fire Management Units
- b. The Board of the Association
  - i. The Board of the Association will -
    - 1. Be responsible for the governance of the Association.
    - 2. In consultation with the Advisory Forum of the Association:
      - a. set policy for the Association; and
      - b. determine the strategic direction of the Association and make decisions relating to it.
    - 3. Appoint any staff of the Association.
    - 4. Guide, oversee and assist the FPA General Manager in performing their day to day management functions. This includes, but is not restricted to, communication with key roleplayers and members.
    - 5. Compile special reports, documents and policies.
    - 6. Procure the items needed for effective management of the Association.
    - 7. Represent the Association on other committees or meetings as needed from time to time.
    - 8. Prepare and sign off annual financial documents after membership approval.
    - 9. From time to time assign responsibilities and specific tasks to a member, employee, a person or an institution. This will include a committee that determines staff remuneration packages.
  - ii. The Board of the Association will consist of the following:
    - 1. As full members:
      - a. By virtue of their office:
        - i. The Chief Fire Officer of the District Municipality;
        - ii. The Fire Advisor employed by the Department of Agriculture responsible for the district;
      - b. By virtue of their land ownership:
        - i. One representative from a nature conservancy;
        - ii. One person collectively representing the Government Department, Local Authority and other Organ of State that manages land within the boundaries of the Association;
        - iii. One private landowner from each Fire Management Unit:
          - such private land owner to be nominated by the members of that Fire Management Unit at the AGM;
          - 2. in the event of such private landowner not being nominated or subsequently vacating office, a landowner from that fire management unit may be co-opted by the Board.
    - 2. As associate members:
      - a. any other member that has been co-opted for a specific input or task; and
      - b. any service provider engaged within the Working on Fire programme.

- 3. An associate member does not have voting rights on the Board, but can provide input to the issue in hand; and
- 4. A person in the employment of the Association may not be elected to the Board.
- iii. The Board will be convened as follows:
  - 1. At the AGM, the members will elect a person who is a member of the Board by virtue of their landownership to serve as the Chairperson,
  - 2. The members of the Board, including the Chairperson, are elected for a period of two (2) years, but may stand for re-election at the end of that period. The membership of the Board will be staggered so to ensure continuity with 50% being appointed each year; and
  - 3. If any Board member resigns, dies, becomes incapacitated or disqualified, or is removed from office, the Board will appoint a suitable candidate to serve on the Board for the remaining period until the next Annual General Meeting.
  - 4. A member of the Board becomes disqualified if he or she:
    - a. is declared to be of unsound mind by a court of law;
    - b. is convicted of a crime involving fraud or corruption. Any member serving a suspended sentence may not serve on the Board; and
    - c. has been absent without a valid reason from two consecutive Board meetings.
- iv. Between Annual General Meetings the Board will seek to discharge its business at meetings convened to take place immediately after the meeting of the District Fire Working Group, or every four months, whichever occurs sooner; and
- v. A minimum of five (5) Board members, which includes the Chief Fire Officer, present at a meeting will constitute a quorum.
- c. The Advisory Forum of the Association
  - i. The [NAME] District Fire Working Group convened by the Chief Fire Officer of the District will serve as the Advisory Forum of the Association.
  - ii. The Advisory Forum of the Association will:
    - 1. Give strategic guidance to the Association; and
    - 2. Help integrate the fire management efforts of the Association into other fire management initiatives within the district.
- d. The Management Oversight Committee:
  - The function of the Management Oversight Committee is to oversee the day to day function of the affairs of the Association between Board meetings;
  - ii. The Chairperson of the Board and the Fire Protection Officer will form the management oversight committee; and
  - iii. The Management Oversight Committee will meet monthly with the FPA Manager.
- e. The Management Team:
  - The Board may employ any person it considers necessary to help the Association to carry out its function, including an FPA manager; and
  - ii. All employees remain in employment notwithstanding any change in the Board.
- f. Fire Management Units:
  - i. A Fire Management Unit of the Association:
    - consists of a localised area, in which integrated fire management efforts between individual landowners can be most effectively coordinated, existing FPA's becoming part of the Association will generally become a single Fire Management Unit;
    - 2. may in turn be divided into small fire management areas based on logistical fire management requirements;
    - 3. gives guidance to the Association on Integrated Fire Management in the area covered by the FMU:
    - 4. is to hold bi-annual meetings for the purpose of pre-fire season planning and post-fire season feedback; and

- 5. may require that the Association ring-fences assets provided and funds raised by the fire management unit as being for the benefit of that Fire Management Unit.
- ii. The area of the individual Fire Management Units will be determined annually by the majority of the members at the Annual General Meeting.

### 16. Finances

- a. The financial year of the Association starts on 1 April and ends on 31 March of the following year.
- b. The Association will appoint a suitably qualified person and/or institution to be responsible for the financial administration of the Association.
- c. The person and/or institution must present a financial statement of the Association's accounts for the previous financial year, including full details of income, expenditure and assets.
- d. The financial statement must be available within reason for inspection by any member for a period of three (3) weeks (21 days) from the date of the annual general meeting.
- e. All financial year-end documents must be signed off by the Board.
- f. The Association will operate as a voluntary association in terms of the common law, unless the National Veld and Forest Fire Act is amended to provide for a non-profit Company and the members then decide to change the nature of the entity.
- g. The Association will further operate as a non-profit organisation.
- h. A bank account and, if necessary, petrol and debit/credit cards will be opened at an accredited financial institution as decided by the Board.
- i. The year-end financial statements must be signed off by the board.

### 17. Annual General Meeting

- a. An annual general meeting must be called by the Board
  - i. within sixty (60) days of the end of the financial year, and
  - ii. with fourteen (14) days of written or emailed notice to all members.
- b. In addition to any other business, the annual general meeting must include:
  - i. the annual report presented by the FPA General Manager or the Chairperson of the Association;
  - ii. presentation of the financial statements of the Association by the accounting officer;
  - iii. the Fire Protection Officer's report;
  - iv. the introduction and approval of any increase of fees, charges or interest;
  - v. changes to the constitution, business plan and rules; and
  - vi. additional agenda points that have been submitted to the FPA General Manager at least seven (7) days prior to the meeting.
- c. Each Fire Management Unit will be entitled to delegate one voting member to attend and vote at the Annual General Meeting. Such voting member will be determined by simple majority of the paid up members of that Fire Management Unit.
- d. One (1) voting member from each of fifty percent (50%) of the Fire Management Units is needed to form a quorum.
- e. If a quorum is not reached, the meeting is adjourned and after ten (10) minutes may be reconvened where the voting members present will constitute a quorum.
- f. Discussion at the meeting will be limited to the circulated and notified agenda.
- g. Only those voting members whose registration and membership fees are fully paid up have a right to vote, subject to the number of votes described in Section 19.

### 18. Special General Meeting

- a. The Board may convene a special general meeting at any time giving fourteen (14) days' notice stating the reason for the meeting and providing an agenda.
- b. A special general meeting must be convened by the Board if
  - i. thirty (30) or five percent (5%), whichever be the lesser, of the paid-up members request this meeting in writing and name the issues to be dealt with.

- Each Fire Management Unit will be entitled to delegate one voting member to attend and vote at the Special General Meeting.
- d. The voting members present will constitute a quorum.
- e. Discussion at the meeting will be limited to the circulated and notified agenda.

### 19. Voting

- a. Only members qualifying for membership in terms of section 17 (f) may vote on the delegate to represent the relevant Fire Management Unit at an Annual or Special General Meeting.
- b. A member, voting member or Board member may vote for other members by means of a written and signed proxy.

### 20. Dissolution

- a. The Association may be dissolved
  - i. by a resolution passed at an Annual General Meeting or a Special General Meeting called for that purpose; and /or
  - ii. by its deregistration by the Minister under section 8 of the National Veld and Forest Fire Act (No. 101 of 1998).
- b. After confirmation of the dissolution and at that meeting, the members must pass a resolution for the appointment of a liquidator to dispose of the Association's assets, pay its debts and settle its liabilities.
- c. Any net proceeds from the assets of the Association will be paid over by the liquidator to a non-profit organisation with basically the same objectives as the Association.

### 21. Dispute resolution

- a. In the event of a dispute between members regarding operational matters, members must negotiate to resolve the dispute.
- b. If such negotiations fail, any member may approach the Management Oversight Committee, who shall appoint an independent arbitrator of good standing to resolve the dispute and whose decision shall be final. Any costs incurred shall be borne by the parties to the dispute.
- c. In the event of a dispute between members of the Association and Board and/or Management Oversight Committee, then the process in preceding sub-paragraph should be followed with the exception that the appointment of the arbitrator shall be by the Chairperson of the Association and the member's party to the dispute by consensus.

### 22. Declaration

This constitution was adopted as the constitution of the [NAME] FPA at the general meeting held on the						
(List of members that attended are attached as annexure A)						
Signatures						
Chairman	Date					
Secretary	Date					

### Contents

1.	Membership	3
2.	General	3
3.	Specific hazard area protection	3
4.	Housekeeping	3
5.	Fire management/hazard assessment	3
6.	Compliance with fire danger rating system	3
7.	Designated fireplaces	4
8.	Firebreaks	4
9.	Prescribed burns	4
10.	Minimum fire fighting requirements	4
11.	Training	4
12.	Reporting fires	5
13.	Operational response and management/incident command	5
14.	Fire access	5
15.	Actions after fires	5
16.	Statistics	5
17.	Fire debrief	5
18.	Mutual aid agreement	6
19.	Communications	6
20.	Invasive alien plant clearing	6
21.	Enforcement	6

### FIRE PROTECTION ASSOCIATION RULES

(Where rules concern the FPO, he/she is responsible for overseeing the implementation thereof and/or he/she can delegate these duties to a capable person in each management unit)

### 1. Membership

- 1.1 All members must undertake to abide by the Rules and Code of Conduct (Annexure A) of the FPA as stipulated in Chapter 2 section 4(6) of the National Veld & Forest Fire Act (No. 101 of 1998).
- 1.2 All members must be conversant with and abide by the Constitution of the FPA as drafted in terms of the regulations under the National Veld and Forest Fire Act (No. 101 of 1998), which sets out the functions of the Association.
- 1.3 Any landowner applying for membership must complete the "Proforma Membership Application" form, otherwise the application will not be accepted.
- 1.4 It is the responsibility of members to notify the Secretary of the Association in writing of any change of membership details according to Section 8 of the Constitution, including change of ownership.
- 1.5 Members must pay the membership fee as set by the FPA every year before 31 July.
- 1.6 Membership is automatically terminated if a member does not pay the membership fees, charges or interest within 90 days.
- 1.7 In order to terminate membership, members are required to give written notice of termination of membership.
- 1.8 New membership annual fees will be charged prorata.

#### 2. General

- 2.1 All members must comply with the National Veld and Forest Fire Act (No. 101 of 1998) and strive to comply with the Conservation of Agricultural Resources Act (No. 43 of 1983) in terms of alien vegetation clearing.
- 2.2 All members must be conversant with the overall Business Plan, including the Veldfire Management Strategy for the FPA and other Acts and by-laws as mentioned in the Business Plan.
- 2.3 Members must attend the Annual General Meeting (AGM) to elect office bearers and decide on any amendments to the Business Plan and fee structure.

### 3. Specific fire hazard area protection

- 3.1 Members are responsible to isolate any fire hazardous area that is present or likely to develop on their property to eliminate any danger it may create to themselves or adjoining properties.
- 3.2 Where members are in doubt regarding the danger of a specific area they must contact the FPO for advice.

### 4. Housekeeping

4.1 It is the responsibility of every member to ensure that the buildings on their property are protected and made safe against the danger of fires. (Examples of remedies are to create firebreaks and clean areas around properties and orchards, clean gutters, sprinklers on thatched roofs, etc.)

### 5. Fire Management Plan/Hazard assessment

- 5.1 An Integrated Veldfire Management Plan (for a 5 year timeframe) must be submitted for each management unit, to the Executive Committee and FPO for approval, within a year after the registration of the FPA. Also see Section 9. This 5-year plan will include an annual plan of operation.
- 5.2 Members must carry out an annual Fire Hazard Audit in conjunction with the relevant representative member of the Executive Committee during February or March and prepare an action plan where this affects their property.

### 6. Compliance with Fire Danger Rating (FDR) System

- 6.1 Forecasts of the fire danger rating will be communicated to members on a daily basis
- 6.2 Members must be conversant with the daily fire danger rating system and comply with the instruction (pertaining to the danger ratings, e.g. fires in the open air, standby levels, etc.), enforce and apply prescribed actions and restrictions strictly. See Standard Fire Rating requirements.

### 7. Designated fireplaces

Must be at a site or permanent constructed fireplace surrounded by ground that is clear of all combustible matter for a distance of at least 2 meters. Fires may not be left unattended until entirely extinguished.

#### 8. Firebreaks

- 8.1 All members are responsible for the creation of firebreaks and must comply with the prescriptions for firebreaks in the approved Integrated Veldfire Management Plan for each management unit.
- 8.2 Firebreaks must be prepared and maintained on an annual basis as from January, and must be completed by no later then the end of March.
- 8.3 Members must comply with the National Policy applicable to exemptions.
- 8.4 Firebreaks may be prepared by any method but must avoid negative environmental impacts as far as possible.

### 9. Prescribed burning

- 9.1 Members must comply with the prescribed burning program where it applies to their property and the program must be updated annually during November.
- 9.2 Members intending to conduct a prescribed block burn must obtain a burning permit from the relevant authorities delegated by the Fire Protection Association to conduct the burn.
- 9.3 Members must observe all conditions of their burning permit.

### 10. Minimum fire fighting requirements

- 10.1 All members must comply with Chapter 5 of the National Veld and Forest Fire Act (No. 101 of 1998) by having equipment, protective clothing and trained personnel as is reasonable for the extent of the member's property. Adhere to minimum requirements for fire fighting.
- 10.2 Before approval of the Integrated Veldfire Management Plan as stipulated in Section 5.1, the representative Executive Committee member and the FPO must evaluate all the properties within the management unit and will check compliance with the minimum fire fighting requirements as per Section 10.1.
- 10.3 Current members of the FPA with fire fighting capabilities may assist other members as the Mutual Aid Agreement.
- 10.4 All members must ensure that, in their absence, there is a responsible person present on or near the property that will assist in extinguishing fires and take reasonable steps to alert the FPO and neighbouring landowners when the Fire Danger Rating is high.

### 11. Training

- 11.1 Members and/or their staff performing fire fighting must be trained in basic fire fighting by a FIETA/ SETA accredited training institution.
- 11.2 All persons fighting fires must have the minimum safety equipment and protective clothing that is required for fire fighting.
- 11.3 The FPA will have the following responsibilities with regards to training:
  - Schedule courses for members and persons in charge of fires or firefighters;
  - Schedule refresher training on a regular basis for trained members and staff;
  - Schedule training for new members and their staff;
  - Ensure that training is conducted on an acceptable level; and
  - · Organise field days for members, staff and firefighters for additional training.
- 11.4 A member has the following responsibilities in regard to training:
  - · Make persons available for scheduled courses;
  - Carry the cost of refresher training if funding could not be secured;
  - Keep a register of all trained persons in their service, which include name, ID, type of course, training institution, and copy of certificates.

### 12. Reporting Fires

- 12.1 Members must report all fires immediately after being sighted to their neighbours and the FPA / FPO.
- 12.2 The landowner on whose property the fire started must fight the fire. Members must offer assistance wherever practically possible. This assistance may be charged at a prescribed tariff determined annually by FPA.
- 12.3 Members must be aware of the weather conditions and other circumstances regarding the spread of the fire and to take adequate precautions and actions during a fire situation.
- 12.4 The FPA / FPO will follow the fire reporting structure as described by the fire management plan for different management unit.

### 13. Operational response and management / incident command

- 13.1 Members must adhere to the fire fighting command structure as per the Business Plan and be conversant with the chain of command and communication procedures for the management unit.
- 13.2 Members must be aware that the FPO may assume command upon arrival.
- 13.3 Members must verbally hand over the incident to the FPO and inform him/her of any specific danger areas.

#### 14. Fire access

- 14.1 Members must ensure that access routes for fire fighting are reasonably maintained.
- 14.2 Members must understand that in the absence of any access, fences will be damaged to gain access to the fire. Repairs to the fences will be for the account of the landowner on whose property the fire is burning.

### 15. Post fire actions

- 15.1 The following Mopping-up Rules to apply:
  - The scene of the fire may not be left unattended.
  - The perimeter must be patrolled and any smouldering material within 5m of the perimeter of the fire
    extinguished. Patrolling is especially necessary where underground fires may have occurred e.g. in
    dense litter or marshy ground.
  - The fire line should be patrolled for at least two days or until a qualified Fire Boss declare the
    area safe.
- 15.2 All fires must be reported to the Fire Protection Officer on the standard Fire Report form with an accurate to-scale map. The FPO must send this to DAFF and the FPO who must keep statistics of all fires in the FPA.
- 15.3 Areas exposed by fire, which have the potential for erosion, must be identified for future action.
- 15.4 All fire fighting equipment must be checked and serviced after each fire.
- 15.5 The FPO must conduct a debriefing session to evaluate the fire fighting action in all major fires. Members should make every effort to attend post mortems of fires that they were involved in or were threatened by.

### 16. Statistics

- 16.1 Each management unit must supply fire statistics to the FPO including a fire report or or where assistance was rendered at a fire, to ensure adequate record.
- 16.2 The FPO must update the statistics and forward it to the Secretary for annual submission to the Minister.
- 16.3 Members must hand in the prescribed fire reports within 5 days after a fire has been brought under control.

### 17. Fire Debrief

17.1 The FPO will conduct a fire debrief when necessary to discuss the actions during the fire especially where the fire spread across properties.

### 18. Mutual aid agreement

18.1 Where appropriate, each management unit members shall draw up formal agreements with neighbours within the unit regarding mutual assistance and procedures.

### 19. Communications

Radio and telecommunication standards:

- 19.1 Members must ensure that some form of communication is achieved with their staff and other members
- 19.2 Member contact details must be given to all members and the FPO in order to communicate with each other.
- 19.3 Spare radios may be handed to members at the fire scene for the FPO to communicate with them during a fire situation

### 20. Invasive Alien Plant Clearing

- 20.1 The coordinated removal of invasive alien plants is of importance to reduce combustible fuel and to improve biodiversity.
- 20.2 Fire Management Units must compile a map of the current status of invaded areas.
- 20.3 Landowners must endevour to secure funds to clear areas according to a priority plan.
- 20.4 The use of biological control should also be considered for the eradication of invading aliens.

#### 21. Enforcement

- 21.1 The following will be the enforcement officers regarding provisions under the National Veld and Forest Fire Act (No. 101 of 1998), by-laws affecting fires, and the rules of the FPA as applied within the area of the FPA:
  - · The Fire Protection Officer;
  - The Chief Fire Officer and members of the Fire Service;
  - · Forest Officers of the Department of Agriculture, Forestry And Fisheries; and
  - Members of the South African Police Service.

## TOOL 4: PROFORMA MEMBERSHIP APPLICATION FORM

I. MEMBER INFORMATION						
Landowner's name / Nam						
Name of property						
Responsible person (mana	ger)					
		<u>'</u>				
		P.O Box / Pri	ivate Bag			
		Town				
		Postal code				
Contact details		Tel				
		Fax				
		Cell				
		E-mail				
Accounting details: Name	e of account holder					
Contact person for accoun	nts enquiries					
E-mail address for accoun	ts					
Municipality						
Fire Management Unit						
GIS	GIS Pastel					
	Please send completed forms to					
[Fire Protection Association]						
age 1						

Farm name and number				Size
TOTAL AREA				
Name Surrounding neighbours				Contact number
8. OWN FIRE FIGHTING RESOURCES  Item Qua		itity	Item	Quantity
Trained teams and numbers available			Radios including NEAR	
Bakkie Sakkies (300-700I)			Aerial refill points	
Tankers with capacity mor than 1000l	е		Trailed Sprayers ("Spuit Karre")	
Fire Beaters			Knap Sacks	
-	nual Fee per	ding on the s	size of the property	More than 2025ha = R
51ha or less = R	51-500ha = R		500 – 2025ha = R	per hectare
Other government departments, institutions that are not landowners			R	/year
gnature				/20
		Please send	l completed forms to	

2. PROPERTY INFO

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### TOOL 5: GUIDELINES TO ASSESS FORM 1 - APPLICATION TO REGISTER AN FPA

#### APPLICATION TO REGISTER A FIRE PROTECTION ASSOCIATION PART 1

An FPA must apply for registration in two parts. The first part is the completion and submission of Form 1, "Application to register a fire protection association Part 1", for the Department's approval. The reason for this is that before FPAs spent a large amount of time and effort required to fill in Form 2, the Department needs to ensure that four basic prerequisites for the formation of the FPA have been met: the name of the FPA is unique; the area of the FPA is appropriate (not too small, too large or overlapping with another FPA); no other FPA exists within the same area; and local government approves of the formation of the FPA.

#### Particulars of the Fire Protection Association

Elements in application form	Guiding notes
1.1. Name:	This field must contain the phrase "Fire Protection Association". The name must be unique for any given District or Metropole; Head Office will check against the record of applications and registrations to ensure this but will issue lists at regular intervals to guide applicants. [Alternately, the FPA Registration Management System will have a facility to check the name.]  Assessment criterion: item is complete.
1.2. District Municipality(ies) or Metropole(s) within which the Fire Protection	This section requires the name of: a) a category A municipality, i.e. a metropole, or b) a category C municipality, i.e. a District Municipality.
Association would fall	Note that an FPA should for administrative purposes be confined to a single District or Metropole but that there may be good reason in some cases to have a transboundary FPA. See also 4 below.
	Assessment criterion: item is complete and agrees with the Demarcation Board name and boundaries.
1.3 Subdivision of the District or Metropole, such as a Local Municipality or District Management Area, within which the Fire Protection Association would fall	Within a metropole, local affairs may be governed by subcouncils, to which the municipality may delegate powers.  Within a District municipality there may be several category B, or local, municipalities; where there is an area within the District where a local municipality is not feasible, that area is governed as a district management area. Within a local municipality, ward committees may govern local affairs. Note that an FPA should for administrative purposes have boundaries that coincide with one or more local municipalities or subcouncil areas but that there may be good reason in some cases to have a transboundary FPA. See also 4 below.
	Assessment criterion: item is complete and agrees with the Demarcatio Board name and boundaries, or if the boundaries do not agree there is sufficient reason for this (refer 4 below).
1.4 Province	The name of the Province is needed to help locate the FPA. There may be cases where, for good reason, the boundaries of the FPA cross the provincial boundary, in which case the applicant will give more than one name.  Assessment criterion: item is complete.
1.5 Is this an existing organisation such as a Farmers' Association, Fire Control Committee, Nature Conservancy or Disaster Management structure that wishes to register as an Fire Protection Association?	Because some organisations may already exist for the same purposes as intended for FPAs, or may easily accommodate the purposes, and because it is sensible to avoid duplication of organisations, the Act provides for the Minister to recognise various kinds of organisations as FPAs (section 4(3)), on the condition that each is open to all owners in its area and, obviously, meets the requirements for registration.  Assessment criterion: item is complete.

Elements in application form	Guiding notes
If yes give the name of the existing organisation and date of formation	Assessment criterion: item is complete.
1.7 If yes give the title of the statute or ordinance under which the organisation was formed	There is a wide range of statutes under which the relevant organisation may be constituted, such as the Conservation of Agricultural Resources Act, the Forest Act, the Mountain Catchment Areas Act, and provincial nature conservation ordinances. The applicant must stipulate the applicable legislation since this determines the purpose of the organisation and therefore whether or not it can accommodate the objectives of an FPA.
	Assessment criterion: item is complete and the organisation is of a kind that accommodates the objectives of an FPA; not required if the organisation is a voluntary one such as a Farmers' Association.

### 2. Particulars of the person initiating the registration of the Fire Protection Association

Elements in application form	Guiding notes
2.3 Surname 2.4 Initials 2.5 Title	This should be the name of the person applying on behalf of the FPA.  Assessment criterion: items are complete.
2.6 Postal address:	The nature of the information required here is self-evident.  Assessment criterion: item is complete.
2.7 Physical address (only if different from postal address):	The nature of the information required here is self-evident.  Assessment criterion: item is complete if 2.4 is not given.
2.8 Contact telephone during office hours 2.8.1 area code: 2.8.2 number: 2.8.3 ext.: 2.8.4 cellphone:	The nature of the information required here is self-evident.  Assessment criterion: items are complete.
2.9 E-mail address:	

# 3. Declaration that no owner has been deliberately excluded from meetings or discussions about the formation of the Fire Protection Association

Signed declaration that:  (i) No owner has been deliberately excluded from meetings of discussions about the formation of the FPA  (ii) All reasonable steps have been taken to include owners in the meetings and discussions.	The initiators of the FPA need only to take reasonable steps to include owners and not all possible steps. They should take the steps that a reasonable person would take, bearing in mind that the reasonable person in law is the average man or woman, not reckless or overcautious, and aware of their surroundings and the dangers inherent in various activities. What the specific steps are would depend on the area in which the FPA was being organised. If there are many absentee landowners, the steps one takes to inform them will be different from the steps one would take to inform the executive body of a community which is well known and accessible.  The person signing should be the same as the representative in 2 above.  Assessment criterion: (a) item is complete and (b) the Forest Officer trained in advising on FPAs is regional satisfied that the statement is true.

### 4 Particulars of the area of jurisdiction of the Fire Protection Association

EI	ements in application form	Guiding notes
4.	If the area coincides with that of a municipality, name the municipality	Assessment criterion: item is complete and agrees with the Demarcation Board name and boundaries
4.	2 If boundaries do not agree with part or any of the boundary of your District Municipality or the boundaries of your local municipality, please give brief reasons for this	This needs to be completed if the area is only part of a municipal area, or area of a subdivision of the municipality. This is especially important if the area includes parts of adjoining municipalities of subdivisions of municipalities.  It is desirable but not essential that the boundaries of an FPA coincide wholly or partly with the boundaries of the municipality in which it falls. Agreement with municipal boundaries is useful because this will make for easier administration, including better coordination with the local Fire Service, more effective access to local government funding. The same would apply if the FPA were contained within the boundaries of the municipality, even if its boundaries do not everywhere coincide with the municipal boundary.  However, there are often important considerations relevant to effective veldfire management that dictate a departure from municipal boundaries. It would be wrong to have an FPA include too wide a range of ecological conditions, or to be configured in such a way that the veldfire management strategy becomes impractical.  Assessment criterion: the validity of the reasons given are a matter of judgement and should be assessed by discussion with the applicant but should carry the support of the Chief Fire Officer where there is a municipal fire service or otherwise the FPO; note that an FPA boundary that crosses from one municipality to another will require a mutual assistance agreement between neighbouring fire services, as provided for in the Fire Brigade Services Act, and this should be part of the documents for the FPA business plan.
4.	3 Give a brief explanation of why you chose to define your area as it is	This explanation should focus on ecological conditions or on the practicality of the veldfire management strategy.  The Department will approve the boundaries if they  (i) are suitable with regard to the requirements for veldfire management in the area;  (ii) allow the FPA to undertake its duties in terms of section 5 of the Act effectively within the area; and  (iii) have been chosen in the best common interests of the population as a whole within the metropolitan or district municipality boundaries.  Assessment criterion: here too the validity of the applicant's reasons is a matter of judgement and should be assessed by discussion with the applicant; there should however be good reasons for obvious anomalies in the area defined for the FPA, such as if it seems too small or too large, includes contrasting climatic areas, or has irregular boundaries.
4.	4 Please attach a 1:250 000 topo-cadastral map or a map issued to you by the Department showing the boundaries of your FPA. Indicate wherever there is a common boundary with a neighbouring Fire Protection Association and write the name of that Association on the map	The applicant may use a copy of the printed map obtainable from the Government Printer or a photocopy of the map. Alternatively, Geomatics or the Regional GIS in the Department may print a map for the applicant. The map does not have to show the boundaries of non-FPA members whose properties fall within the FPA area.  Assessment criteria: boundaries should mostly coincide with farm and town boundaries; there should not be gaps between the FPA boundaries and those of adjoining or nearby FPAs.

4.5 Estimated extent of the area within the boundaries of the FPA	Assessment criteria: item is complete and Forest Officer trained in advising on FPAs is satisfied it is a reasonable estimate.
4.6 Estimated proportion of the area represented by owners who would be members of the FPA	Assessment criteria: item is complete and Forest Officer trained in advising on FPAs is satisfied it is a reasonable estimate.

# 5. Declaration that no other Fire Protection Association is intended or exists within the area of the Fire Protection Association

Elements in application form	Guiding notes
Signed declaration.	This requirement is self-evident.
	Assessment criterion: item is complete. The person signing should be the same as the representative in 2 above.

#### 6. Declaration by the person initiating the formation of the Fire Protection Association

Elements in application form	Guiding notes
Signed declaration.	This requirement is self-evident. The person signing should be the same as the representative in 3 above.
	Assessment criterion: Item is complete.

#### 7. Recommendation by an appropriate representative of local government

Elements in application form	Guiding notes
Signed recommendation.	This requirement is self-evident.
	Assessment criteria: Item is complete. The person signing the declaration may be (a) the Mayor (b) a member of the municipal Executive Committee (c) the head of the local Disaster Management Centre (d) the Chief Fire Officer, but should not be the same person as that in 6 above.

## 8. Recommendation by the regional representative of the Department of Agriculture, Forestry and Fisheries

Elements in application form	Guiding notes
Signed recommendation.	This requirement is self-evident.
	Forest Officer trained in advising on FPAs should be satisfied that the notice of intent is properly founded and that he or she can show due diligence in the administration of the notice.

# 9. Declaration by the Regional Chief Director (Cluster Manager) of the Department of Agriculture, Forestry and Fisheries

Elements in application form	Guiding notes
Details of Regional Chief Director (Cluster Manager) and support for recommendation of Forest Officer in 8.	Assessment criterion: the Regional Director or his/ her delegate must complete the items and sign the recommendation.

Page 4

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## TOOL 6: APPLICATION FOR REGISTRATION OF AN FPA [FORM 1]

## DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES:

### FORM 1: APPLICATION FOR REGISTRATION OF A FIRE PROTECTION ASSOCIATION PART 1

1.1.	Name:
1.2.	District Municipality(ies) or Metropole(s) within which the Fire Protection Association would fall (give the additional names if there is more than one):
1.3.	Subdivision of the District or Metropole, such as a Local Municipality or District Management Area, within which the Fire Protection Association would fall (give the additional names if there is more than one):
1.4.	Province(s) (give the additional names if there is more than one):
1.5.	Is this an existing organisation such as a Farmers' Association, Fire Control Committee, Nature Conservancy or a Disaster Management structure that wishes to register as a Fire Protection Association? Yes/No
1.6.	If yes, give the name of the existing organisation and date of formation:
	Name: Date of formation:
1.7.	If yes, give the title of the statute or ordinance under which the organisation was formed (if any):
1.7.	if yes, give the title of the statute of ordinance under which the organisation was formed (if any).
Part	iculars of the person initiating the registration of the Fire Protection Association
<b>Part</b> 2.1.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2. 2.4.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2. 2.4.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2. 2.4.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2. 2.4.	iculars of the person initiating the registration of the Fire Protection Association  Surname
Part 2.1. 2.2. 2.4.	iculars of the person initiating the registration of the Fire Protection Association  Surname

	een deliberately excluded fr	of my knowledge no owner within the area of the Fire Protection Association om meetings or discussions about this Fire Protection Association and that iken to include owners in the relevant meetings and discussions.
Name	 Э	Signature
 Capa	city	Date
Parti	culars of the area of juriso	liction of the Fire Protection Association
4.1.	If the area coincides with the	nat of a municipality, name the municipality:
4.2.		with part or any of the boundary of your District Municipality or the unicipality, please give brief reasons for this:
4.3.	Give a brief explanation of v	why you chose to define your area as it is:
4.4.	Please attach a 1:250 000 the boundaries of your Fire	topo-cadastral map or a map issued to you by the Department showing Protection Association. Indicate wherever there is a common boundary otection Association and write the name of that Association on the map.
4.5.	Estimated extent of the are	a within the boundaries of the FPA:[hectares]
4.6.	Estimated proportion of the	e area represented by owners who would be members of the FPA[%]
	aration that no other Fire I Protection Association	Protection Association is intended or exists within the area of the
	eby declare that to the best on any part of the area of the	of my knowledge no other Fire Protection Association exists or is planned Fire Protection Association.
Name	9	Signature
Capa	city	Date
Decla	aration by the person initia	ating the formation of the Fire Protection Association
6.1.	Surname:	
	Initials:	6.3. Title:
6.2.		
	I declare that the information	on given in this form is true and correct.

7.1.	Surname:	
7.1. 7.2.		7.3. Title:
7.4.		7.6. 1110.
7.5.	I recommend that the Fire I following qualifying require	Protection Association should go on to complete Form 2, with the
	OR	
	following reasons:	ne Fire Protection Association should go on to complete Form 2, for the
	••••••	
	Signature  ommendation by the region	Date  nal representative of the Department of Agriculture, Forestry
<b>and</b> 8.1.	Signature  ommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry
and 8.1. 8.2.	Signature  ommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:
and 8.1. 8.2.	Signature  ommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry
and 8.1. 8.2. 8.4.	Signature  Signature  ommendation by the region  Fisheries  Surname:  Initials:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:
and 8.1. 8.2. 8.4.	Signature  Dommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:
and 8.1. 8.2. 8.4.	Signature  Dommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:
and 8.1. 8.2. 8.4.	Signature  Dommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:
and 8.1. 8.2. 8.4.	Signature  Dommendation by the region Fisheries  Surname:	Date  nal representative of the Department of Agriculture, Forestry  8.3. Title:

Signa	ature	Date	
	ration by the regional Ch ulture, Forestry and Fish	nief Director (Cluster Manager) of the Department of eries	
	•		
9.2.	Initials:		
0.4	Position:		
9.4.			
	port the recommendation		
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	set out in 8 above.	
I sup	pport the recommendation	Set out in 8 above.  Date  FOR OFFICE USE ONLY	
I sup	ature	FOR OFFICE USE ONLY /ED:	
I sup	NOTIFICATION APPROV	FOR OFFICE USE ONLY /ED:	
I sup	NOTIFICATION APPROV	FOR OFFICE USE ONLY /ED: PROVED:	
I sup	NOTIFICATION APPROV	FOR OFFICE USE ONLY /ED: PROVED:	

## DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES: FORM 2: APPLICATION FOR THE REGISTRATION OF A FIRE PROTECTION ASSOCIATION PART 2 AND APPLICATION FOR THE REGISTRATION OF ITS FIRE PROTECTION OFFICER

1.1.	Name:	
1.2.	. District(s) or Metropole(s):	
	1.2.1 Subdivision (local council) within which	
1.3.		
	rticulars of the representative of the Fire Prote the proposed Fire Protection Officer)	ction Association (this person should not
2.1.	Surname:	
2.2.	. Initials: 2	3. Title:
2.4.	. Postal address:	
2.5.	2.4	4.1. Postal code:
2.5.	. Physical address (only if different from postal address)	4.1. Postal code:ddress):
2.5.	. Physical address (only if different from postal address)	4.1. Postal code:ddress):
2.5.	. Physical address (only if different from postal address)	4.1. Postal code:ddress):
2.5.	. Physical address (only if different from postal a	4.1. Postal code:ddress):
	. Physical address (only if different from postal a	4.1. Postal code:ddress):
	. Physical address (only if different from postal address)	4.1. Postal code:
	Physical address (only if different from postal and second	4.1. Postal code:
	. Physical address (only if different from postal address)  . Contact telephone number during office hours:  2.6.1. Area code:  2.6.2. 2.6.3. Extension:  2.6.3. 2.6.3.	4.1. Postal code:
2.6.	Physical address (only if different from postal and second	4.1. Postal code:
2.6.	. Physical address (only if different from postal address)  2.5  . Contact telephone number during office hours: 2.6.1. Area code: 2.6.3. Extension: 2.6  . E-mail address:  dress of the office of the Fire Protection Assoc	4.1. Postal code:  ddress):  5.1. Postal code:  .6.2. Number:  .4: Cellphone:
2.6.	. Physical address (only if different from postal address)  2.5  . Contact telephone number during office hours: 2.6.1. Area code: 2.6.3. Extension: 2.6  . E-mail address:  dress of the office of the Fire Protection Assoc	4.1. Postal code:  ddress):  5.1. Postal code:  .6.2. Number:  .4: Cellphone:

	3.2.	Postal address:		••
			3.2.1 Postal code:	
	3.3.	Telephone number during office hours:		
		3.3.1. Area code:	3.3.2. Number:	
	3.4.	E-mail address:		
4.	Part	culars of the founding meeting		
	4.1.	Attach copies of advertisements of the four Attached/not attached.	nding meeting published in newspapers, if any	
	4.2.	Describe other means by which owners wer	re notified of the founding meeting, if any.	
	4.3.	Attach the minutes of the founding meeting		•••
	4.4.	Attach a list of names and contact details o	f members of the elected Executive Committee.	
	 Nam	ciation and that all reasonable steps have be	en taken to include owners in the meeting	
	Capa	city	 Date	
	•			
6.		titution of the Fire Protection Association		
	6.1.	Attach a copy of the Association's constitut	ion	
7.		aration that the membership of the Fire Pers within the area	rotection Association will be representative of	
	7.1.	Association have had the opportunity to join	vledge all owners within the area of the Fire Protection in the Fire Protection Association and that the area eliberately exclude any owner from the Fire Protection	
		Name	Signature	<b></b>
		Capacity	Date	
				Page 2

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8.	Record of any	objections	to the	formation	of the Fire	Protection	Association
----	---------------	------------	--------	-----------	-------------	------------	-------------

8.1. Attach a list of the names and addresses of those objecting, and describe the nature of objections raised, if any.

P.1.	Surnam	ne:
2.2.	Initials:	9.3. Title:
9.4.	ID num	ber:
9.5.	Position	n held in employer organisation:
0.6.	Contac	t address:
		Postal code:
9.7.	Attach	curriculum vitae of the Fire Protection Officer designate.
.8.	Please	provide the details of two referees:
	First re	feree:
	9.8.1.	Surname:
	9.8.2.	Initials:
	9.8.4.	Postal address:
		Postal code:
	9.8.5.	Contact telephone number during office hours:
		9.8.5.1. Area code: 9.8.5.2. Number: 9.8.5.3. Extension:
		9.8.5.4. Cellphone:
	9.8.6.	E-mail address:
	Second	referee:
	9.8.7.	Surname:
	9.8.8.	Initials:
	9.8.10.	Postal address:
		Postal code:
	9.8.11.	Contact telephone number during office hours:
		9.8.11.1. Area code: 9.8.11.2. Number: 9.8.11.3. Extension:
		9.8.11.4. Cellphone:
	9.8.12.	E-mail address:

9.9.	Is the Fire Protection Officer the Chief Fire Officer of your Fire Service? Yes / No	
9.10.	If yes, give the name of Fire Service:	
9.11.	If no, indicate by choosing the appropriate reason below why the Chief Fire Officer has not been designated:	
	<ul> <li>a) There is no designated fire service within the municipality that includes the area of the fire protection association: Yes / No</li> </ul>	
	OR	
	b) There is a designated fire service within the municipality that includes the area of the fire protection association but the Chief Fire Officer has declined to take the position of Fire Protection Officer: Yes / No	
9.12	Terms of delegation if the Chief Fire Officer is not the Fire Protection Officer	
9 13	Have there been any objections to the appointment of the person named above as Fire	•••
,	Protection Officer?	
	Yes / No	
	If yes, please specify (a) how objections have been resolved, if so:	
	and (b) the nature of any outstanding objections:	
0.40		
9.10	. Does the Fire Protection Association require the Director-General of the Department to designate an officer of the Department to act as its Fire Protection Officer? Yes / No	
	If yes, please give a brief summary of the reasons for this:	
9.11	Please attach 2 ID photographs of the proposed Fire Protection Officer:	
Parti	culars of the business plan of the Fire Protection Association	
10.1.	Attach a copy of the business plan	
		Page 4
		ı age 4

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11.	Parti	culars of the rules of the Fire Protection Association
	11.1.	Confirm that the business plan contains the rules of the Association. Yes / No
12.	Umb	rella Association that will support the Fire Protection Association (if any)
	12.1.	Name of the Umbrella Association:
	12.2.	Services to be provided by the Umbrella:
	12.3.	Name of the Chief Executive Officer of the Umbrella Association:
	12.4.	List of names of other Fire Protection Associations under the same Umbrella:
	12.5.	Declaration by the Chief Executive Officer of the Umbrella:
		I declare that the Executive of the
		Name: Signature:
		Date:
13.	Desc	ription of the capability of the Fire Protection Association
	13.1.	The National Veld and Forest Fire Act requires that the Minister must be satisfied about the capability of the Fire Protection Association before registering it. This will be judged by the contents of the business plan required in 10 above, and the support if any to be provided by an umbrella association. However, if you wish to add more information relating to capability please do so below.
Page 5	<u>;</u>	

I o As th	r Local Municipality) of commitment declare that the constitution and busines	ss plan of the Fire Protection District Municipality/ Metropole/ local municipality (strike out
or I d As	tatement by an appropriate represent Local Municipality) of commitment declare that the constitution and businessociation have the full support of this D	to the Fire Protection Association ss plan of the Fire Protection
	(d) this application	
	(c) the business plan; and	
	(b) the appointment of the Fire Pro	
14	(a) the constitution of the Associat	
_	pproval of the application to form the	e Fire Protection Association meeting(s) at which members approved:
	OR refer to contents of the business	s plan where this is set out:
	the municipality(ies) that include the of agreements to co-operate with the co-operate	:he Chief Fire Officer:

17.1.	Surname:	
17.2.	Initials:	
	Position:	
I reco	ommend the registration of the proposed Fire Protection itions attached (if any):	Association, with the following
OR		
l do r	not recommend the registration of the proposed Fire Prot	tection Association, for the following reason
Signa		
	ommend that the proposed Fire Protection Officer should itions attached (if any):	be registered, with the following
OR		
	not recommend that the proposed Fire Protection Officer wing reasons:	should be registered, for the
follov		
	ature Date	
follov	ature Date	

Signa	ture	 Date
	n by the Regional Chief Dir nd Fisheries	ector (Cluster Manager) of the Department of Agriculture,
10 2 Initia	ls:	18.3. Title:
io.z. iiiilia		
18.4 Posit	ion:ne recommendation set out ir	ı 17 above.
18.4 Posit		17 above.
18.4 Posit	FOR OFFICE USE ONLY	n 17 above. Date
18.4 Posit	FOR OFFICE USE ONLY	17 above Date
18.4 Posit	FOR OFFICE USE ONLY	17 above Date

# DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES FORM 3: NOTIFICATION OF A CHANGE IN THE BOUNDARIES OF A FIRE PROTECTION ASSOCIATION

1.1.	Name:			
1.2.	District or Metropole:			
	1.2.1. Subdivision (local council) within wh			
1.3.				
Add	ress of the office of the Fire Protection Asso	ciation		
2.1.	Physical address:			
2.2.	Postal address:			
		Postal code:		
2.3.	Telephone number during office hours	i ostar code.		
		2.3.2. Number:		
2.4.	E-mail address:	,		
Part	iculars of the proposed change in the area o	of jurisdiction of the fire protection association		
3.1.	(a) the original boundaries of your Fire Protec	p or a map issued to you by the Department showing tion Association (b) the new boundaries of your Fire re is a common boundary with a neighbouring Fire that Association on the map.		
	laration that no other Fire Protection Associ area of the candidate Fire Protection Assoc	ation is intended or exists within the proposed iation		
I hereby declare that to the best of my knowledge no other Fire Protection Association exists or in planned within all or any part of the new area proposed for this Fire Protection Association.				
	e:	Signature:		
Nam				

- 4	Declaration by representative of the Fire Protection Association					
5.1.	Surname:					
5.2.	Initials:	5.3. Title:				
5.4.	I declare that the information gi	ven in this form is true and correct.				
 Name	): ::	Signature:				
Capad	city:	Date:				
Recor		epresentative of the Department of Agriculture, Forestry and				
6.1.	Surname:					
6.2.	Initials:					
6.4.	Position:					

# TOOL 9: NOTIFICATION OF A CHANGE IN MEMBERSHIP OF THE EXECUTIVE COMMITTEE OF AN FPA [FORM 4]

# DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES FORM 4: NOTIFICATION OF A CHANGE IN THE MEMBERSHIP OF THE EXECUTIVE COMMITTEE OF A FIRE PROTECTION ASSOCIATION

1.	Name and registration number of the Fire Protection Association				
	1.1.	Name:			
	1.2.	District or Metropole:			
		1.2.1. Subdivision (local council) within which the FPA is located:			
	1.3.	Registration number:			
2.	Addr	ess of the office of the Fire Protection Association			
	2.1.	Physical address:			
	2.2.	Postal address:			
		Postal code:			
	2.3.	Telephone number during office hours:			
		2.3.1.         Area code:         2.3.2.         Number:			
	2.4.	E-mail address:			
3.		e(s) and address(es) of retiring member(s) of the Executive Committee			
age 1					

Declaration by representative of the Fire Protection Association  5.1. Surname:  5.2. Initials:  5.3. Title:  5.4. I declare that the information given in this form is true and correct and that the new members the Executive Committee have been duly elected as such.  Name:  Signature:  Capacity:  Date:			
Declaration by representative of the Fire Protection Association  5.1. Surname:  5.2. Initials:  5.4. I declare that the information given in this form is true and correct and that the new members the Executive Committee have been duly elected as such.  Name:  Signature:			
Declaration by representative of the Fire Protection Association  5.1. Surname:			
Declaration by representative of the Fire Protection Association  5.1. Surname:  5.2. Initials:  5.4. I declare that the information given in this form is true and correct and that the new members the Executive Committee have been duly elected as such.  Name:  Signature:			
Declaration by representative of the Fire Protection Association  5.1. Surname:			
Declaration by representative of the Fire Protection Association  5.1. Surname:  5.2. Initials:  5.3. Title:  5.4. I declare that the information given in this form is true and correct and that the new members the Executive Committee have been duly elected as such.  Name:  Signature:	•••••		
Declaration by representative of the Fire Protection Association  5.1. Surname:			
5.1. Surname:			
5.1. Surname:	Decl	aration by representative of the F	Fire Protection Association
5.4. I declare that the information given in this form is true and correct and that the new members of the Executive Committee have been duly elected as such.  Name: Signature:			
the Executive Committee have been duly elected as such.  Name: Signature:	5.2.	Initials:	5.3. Title:
	5.4.		
		 Name:	Signature:
Capacity: Date:			
		Capacity:	Date:

### DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES FORM 5: NOTIFICATION OF THE APPOINTMENT OF A NEW FIRE PROTECTION OFFICER

1.	Nam	me and registration number of the Fire Protection Association				
	1.1.	Name:				
	1.2.	District or Metropole:				
		1.2.1. Subdivision (local council) within which the FPA is located:				
	1.3.	Registration number:				
2.	Addr	ess of the office of the Fire Protection Association				
	2.1.	Physical address:				
	2.2.	Postal address:				
		Postal code:				
	2.3.	Telephone number during office hours:				
	2.0.	2.3.1. Area code:				
	2 4	E-mail address:				
3.	Parti	culars of the new Fire Protection Officer of the Fire Protection Association				
	3.1.	Surname:				
	3.2.	Initials: 3.3. Title:				
	3.4.	ID number:				
	3.5.	Position held in employer organisation:				
	3.6.	Contact address:				
		Postal code:				
	3.7.	Curriculum vitae attached of Fire Protection Officer designate: Yes / No				
	3.8.	Please provide the details of two referees				
		First referee:				
		3.8.1. Surname:				
		3.8.2 Initials:				
	_					

	3.8.4.	Postal address:
		Destal and a
		Postal code:
	3.8.5.	Contact telephone number during office hours
		3.8.5.1. Area code:
		3.8.5.4. Cellphone:
	3.8.6.	E-mail address:
Seco	nd refere	e:
	3.8.7.	Surname:
	3.8.8.	Initials:
	3.8.10.	Postal address:
		Postal code:
	3.8.11.	Contact telephone number during office hours:
		3.8.11.1. Area code:
		3.8.11.4. Cellphone:
	3.8.12.	E-mail address:
3.9.	Is the Fi	re Protection Officer the Chief Fire Officer of your Fire Service?
	Yes / N	
3.10.	If yes, g	ive the name of Fire Service:
3.11.	If no, giv	ve reasons why the Chief Fire Officer has not been designated:
		ere is no designated fire service within the municipality that includes the area of the indidate fire protection association
	Yes / N	0
	OR	
	fire	ere is designated fire service within the municipality that includes the area of the candidate protection association but the Chief Fire Officer has declined to take the position of Fire otection Officer
	Yes / N	0
3.12	Terms o	f delegation if the Chief Fire Officer is not the Fire Protection Officer

	3.13	Have there been any objections to the appointment of the person named above as Fire Protection Officer?						
		Yes / No						
		If yes, please specify (a) how objections ha	ave been resolved, if so:					
		and (b) the nature of any outstanding obje	ctions:					
4.	Decl	aration by representative of the Fire Pro	tection Association					
	4.1.	Surname:						
	4.2.	Initials:	4.3. Title:					
	4.4.	I declare that the information given in this	form is true and correct.					
		Name:						
		Capacity:	Date:					
5.		ommendation by the regional representa Fisheries	tive of the Department of Agriculture, Forestry					
	5.1.	Surname:						
	5.2.	Initials:	5.3. Title:					
	5.4.	Position:						
		ecommend that the proposed Fire Protection Officer should be recognised, with the following nditions attached (if any):						
	•••••							
	Name	e:	Signature:					
	Capa	city:	Date:					
Page :	3							

#### TOOL 11: GRANT-IN-AID AGREEMENT

		PARTNERSHIP AGREEMENT ENTERED INTO BY MUNICIPALITY
		(Herein after referred to as) AND
		FIRE PROTECTION ASSOCIATION
		(Herein after referred to as FPA)
		("the parties" refers to both Municipality & FPA)
1.	Prea	amble
	1.1.	This agreement sets out the terms and conditions of the funding provided by the Municipality and the services provided by the FPA.
	1.2.	The FPA is established in terms of the National Veld and Forest Fire Act 101 of 1998 and has been issued with a registration 838/01 by the Department of Agriculture, Forestry & Fisheries.
	1.3.	The FPA has is physical operations base at
	1.4.	The FPA has appointed a Chief Executive Officer (CEO) / Fire Protection Officer (FPO) in terms of the National Veld & Forest Fire Act 101 of 1998 and such person has been registered with the Department of Agriculture, Forestry & Fisherieshas been appointed in this position.
	1.5.	Background
		The
	1.6.	The Duties of the Association in terms of the National Veld & Forest Fire Act 101, 1998
		<ul> <li>Develop and apply a veldfire management strategy for its area;</li> </ul>

- · Provide in the strategy for agreed mechanisms for the co-ordination of actions with adjoining fire protection associations in the event of a fire crossing boundaries;
- · Make rules which bind its members;
- Identify the ecological conditions that affect the fire danger;
- · Regularly communicate the fire danger rating referred to in sections 9 and 10 to its members;
- · Organise and train its members in fire fighting, management and prevention;
- Inform its members of equipment and technology available for preventing and fighting veldfires;
- · Provide management services, training and support for communities in their efforts to manage and control veldfires;
- Furnish any information requested by the Minister in order to prepare or maintain the fire danger rating system; and
- Exercise the powers and perform the duties delegated to it by the Minister.

The rules contemplated above must provide for;

· Any matter which may or must be dealt with in terms of this Act;

- The minimum standards to be maintained by members in relation to all aspects of veldfire prevention and readiness for fire fighting;
- Controlled burning to conserve ecosystems and reduce the fire danger;
- · Any other matter which is necessary for the fire protection association to achieve its objects; and
- A copy of the rules must be lodged with the Minister.
- 1.7. The Association's objectives in terms of membership growth and service delivery. The FPA is focussed on the achievement of the following objectives:
  - To inform and train our community on the risks of fire and to ensure fire prevention and planning is used to mitigate fire in our area.
  - For the FPA area of operation to enjoy the respect and support of our community.
  - To ensure planning and resources are in place to proactively ensure communities within the FPA area
    of operation are appropriately protected in the context of rural fire reduction, readiness, response and
    recovery.
  - To ensure fire suppression is coordinated and effective.
  - To ensure minimum Municipality equipment and personnel standards are met or exceeded while not compromising operational efficiency or effectiveness.
  - To ensure landowners are educated about forest and rural veldfire prevention.
  - To implement a personnel firefighter training programme designed for all members to receive the training of their choice from a minimum Municipality of basic training to crew leader and specialised courses.
  - To re-establish a radio network coverage across Fire Management Units to effectively combat emergencies and for the protection for volunteers / members and the general community.
  - Establish relationships and management systems with our sister agencies (such as Provincial & Local Government departments, commercial forestry and local government fire services) to provide good working relationships and to ensure appropriate levels of hazard reduction are achieved.
  - · Manage and co-ordinate all fire suppression operations.
  - For the FPA rural areas to enjoy the respect and support of our Local Government.
- 1.8. The Service Offered by FPA to its members:
  - Operations Base: FPA operate at the ...... premises. This has become the base for FPA, Working on Ground Crews and IC for the ...... FPA
  - Current Equipment Levels:
    - 2 x Trailers (300L water tank, quick fill pumps, 6 x knap sacks, 6 x rake hoes, 6 x fire beaters)
    - $1\ x$  Trailer tanker (900L water tank, Water pump & 70m hose,  $4\ x$  knap sacks,  $2\ x$  rake hoes,
    - 2 x fire beater)
    - 1 x Toyota Hilux 4x4 Strike Craft
    - 1 x 4x4 Vehicle / Strike craft (See clause 7) equipped for fire prevention and control
    - 1 x 4x4 Vehicle / Strike craft equipped for fire prevention and control
    - Working on Fire: 2 x Samil 4x4 Crew Carriers (1000L water tank, pump & hose, knap sacks, rake hoes, fire beaters and personnel safety equipment)

  - Commercial Fire Prevention & Emergency Fire Assistance: Funding received from the
    municipality to be utilised for the acquisition of additional fire equipment, protective clothing, and
    employment of a trained Working on Fire fire fighting crew, for the benefit of FPA members (first call
    basis). FPA to broaden the emergency assistance currently offered to members, and in conjunction
    with Working on Fire, to FPA members. FPA also plans to extend this fire service to non-members
    (second call basis) at commercial rates. Such service will create a safer community with regard to
    potential veld and forest fires.

2.	FPA Management Overview
	The FPA employs a Fire Protection Officer and a Secretary. Other indirect resources (Working on Fire,
	corporate and private landowners) are affiliated or contracted to ensure an effective and efficient service is
	provided across the area of operation. The FPA is managed by an Executive Committee which has
	representatives from all stakeholder groups i.e
	on Fire / DAFF and Landowners. The Committee is responsible for the governance of the Association and
	the corrider delivery is delegated principally to the Fire Protection Officer

	the service delivery is delegated principally to the Fire Protection Officer.
3.	FPA Area of Operation
	The area of operation is centred on the town of, with the rural areas of, forming the sub-areas within the area of operation.
	The total area under control of the FPA is approximately hectares.
4.	Operational & Service Growth - FPA / Municipality Partnership:
	In order to ensure the FPA is able to deliver the service it is required to do so in a more professional and efficient manner the following is required:
	<ul> <li>Increase membership, and hence fee revenue: to ensure all landowners within the area of operation are compliant with the law (National Veld &amp; Forest Fire Act 101, 1998) and become members of the FPA.</li> </ul>
	To review the fee structure for members relative to the overall service provided.
	<ul> <li>Funding from municipality to primarily the agricutlural ratepayers, as well as the broader rural communities, in that the Municipality would be funding a not-for-profit service provider for the benefit of the ratepayer and the community.</li> </ul>
	• The
	• FPA would not manage structural fire matters and this would be left to District Municipality, but in turn would release District to an extent with regard to rural veld and forest fire control.
	FPA / District Fire Services to ensure co-ordination and assistance at all times.
5.	Strategic Partnership Terms of Arrangement
	Based on the above role & responsibilities of the
	5.1 FPA Responsibilities
	5.1.1. To assist the
	5.1.2. To assist the
	5.1.2.1. on land on or neighbouring to Municipal land - no charge for such service.
	5.1.2.2. on private owned land within the Municipal boundaries – members pay nominal rates for such services and non-members pay commercial rates for such services, as determined by Fire Protection Association.
	5.1.3. To actively participate and assist the
	5.1.4. To assist the

5.2. ..... Municipality

labour charges.

5.2.1. To provide a 4x4 fully equipped strike craft in terms of the attached vehicle agreement.

5.2.2. To provide funding to the amount of R ...... for the acquisition of personal protective clothing and associated equipment for the firefighters.

	5.2.3.	To provide funding to the amount of R for the acquisition of fire fighting and related equipment for use by FPA in its operations (vehicle tools, bulk water storage tanks, knap sacks, fuel containers, drip torches etc.).		
	5.2.4.	To assist financially by way of monthly contributions towards the employment of		
	5.2.5.	To make provision for the possible supply of a second 4x4 vehicle for fire fighting purposes.		
5.	Summary			
	6.1. FPA to become a more service orientated fire organisation for the benefit of its members (i.e. municipality ratepayers), as well as the community in general with regard to veld & forest fire prevention and control.			

6.3. ...... District Municipality is assisted by FPA with regard to its responsibilities in terms of rural fire prevention and control.

6.4. Current equipment utilised by ........................ District Municipality will be released to a large extent (unless absolutely required in case of major threatening disasters) and hence District Fire Service can focus on structural and motor accident call-outs, as well as rural veld and forest fires in other Local Municipalities it serves.

#### 7. Provision of a Municipality Vehicle

#### 7.1. The Vehicle

- 7.1.1. The vehicle is a used Nissan Patrol 4x4 LDV blue in colour with Registration ......
- 7.1.2. The vehicle is to be provided on a loan basis to FPA and ownership of the said vehicle remains with the municipality at all times.
- 7.1.3. The vehicle will be stationed at the FPA base and should such address change at any time, FPA is to request permission, in writing, to relocate the said vehicle to other premises.
- 7.1.4. FPA will be permitted to utilise the said vehicle for fire management purposes within the municipality jurisdictional boundary and at times outside of such boundary, should there be threat of fire to the municipality area.
- 7.1.5. FPA have nominated the CEO / FPO ....... to drive the vehicle. Should the details of the driver change at any time, FPA is required to notify the municipality in writing of such change and should the municipality not provide the necessary authority; the status quo shall remain with regard to the above nominated driver.
- 7.1.6. FPA is required to ensure the vehicle is in safe keeping at all times.
- 7.2. Vehicle Equipment: The vehicle on delivery to FPA is equipped with the following:
  - 7.2.1. 600L blue water tender unit
  - 7.2.2. Honda GX160 engine
  - 7.2.3. Davey twin stage pump complete with all valves and suction pipes
  - 7.2.4. Hose reel
  - 7.2.5. 30m rubber hose & spray nozzle
  - 7.2.6. Hella spot lights
  - 7.2.7. Red LED strobe light with siren
  - 7.2.8. Rear bin light
  - 7.2.9. Steel labour rails
  - 7.2.10. Bull bar, towbar (front & rear)
  - 7.2.11. Radio / CD player with 2 x speakers

			Hazard triangle, jack, Blue canvas seat cove		spare wheel		
					at FPA base		
7	3			-	, at a cost to the FPA.		
				-	at a cost to the TrA.		
7.	4.		nance, Fuel and Insura		concess (angine convices posset trees, and any other		
		7.4.1.	mechanical maintena	nce) for the vehice FPA. Such maint	tenance (engine service, new tyres, and any other cle in terms of the funding arrangement between the enance to be allocated against the FPA monthly funding	S	
		7.4.2.	policies and again in	terms of the fund	e as required in terms of municipality insurance ling between the municipality and the FPA. Such FPA monthly funding from the municipality.		
		7.4.3.			l, not to exceed a monthly limit of R per mored against the FPA monthly funding from the municipality		
		7.4.4.	FPA will undertake all		nd tyre repairs, in terms of its sponsor arrangements wd [SupaQuick].	vith	
		7.4.5.			e report to the municipality Chief Financial Officer on a on the vehicle does not exceed the funding allocation.		
		7.4.6.	FPA undertake to tak immediately to the m		e vehicle at all times and shall report any incident		
8. Te	rm	of Agr	eement, Termination	, Legal Notices			
8.		months	his partnership agreement continues for each financial year of the municipality and requires three nonths written notification to Fire Protection Association should the municipality wish to erminate the agreement.				
8.	.2.	For the purpose of this agreement, including the giving of notices and the serving of legal process, the parties select domicilium citandi et executandi at the addresses recorded below:					
			Municipality P O Box:				
					FPA:		
8.	3.	This ag South A		preted and imple	mented in accordance with the laws of the Republic of		
8.	8.4. It is mutually agreed that this agreement will for detailing the overall funding arrangement will be						
Signed				on this	of January 20		
			by the				
Print N	lan	ne:					
Signed at				on this	of January 20		
			by the		Fire Protection Association		
Print N	lan	ne:				Dogo F	
						Page 5	

FYNBOSFIRE ®



#### TOOL 12: MOTIVATION FOR FINANCIAL ASSISTANCE TO MUNICIPALITY

### INSTITUTIONAL AND FINANCIAL SUSTAINABILITY OF FIRE PROTECTION ASSOCATIONS IN THE XXX DISTRICT

#### **Proposal**

The xxx District Municipality is requested to fund the engagement of a service provider to assist with the establishment and functioning of a single Fire Protection Association operating in the xxx District.

#### **Background**

The xxx District is characterised by extensive farmlands that make it one of the most economically productive agricultural areas in the country, and large mountain ranges that are rich in biodiversity and provide critical ecological services to the district and to the province. It is also characterised by annual wildfires that can have devastating impacts on people, property and agricultural and ecological processes.

In order to reduce the impacts of these wildfires there has been a move towards integrated fire management that assumes an integration of management responses between different organs of state as well as an integration between the public and private sector. It also assumes a strategy that places emphasis as much on prevention and mitigation as it does on suppression.

#### Legal framework

In terms of section 84(1)(j) of the Local Government: Municipal Structures Act, 1998 the management of wildfires falls to the district municipality, which has established a fire fighting service in terms of the Fire Brigade Services Act, 1987. This responsibility of the district municipality for preventing, managing and preventing wildfires is carried through into the National Disaster Management Act, 2002. In terms of section 43 of that Act the District Municipality must establish a district disaster management centre and, in terms of section 45, appoint a person as head. The Chief Fire Officer of the fire fighting service in the xxx District was previously appointed as head of the disaster management centre. However, that post has now been split with the Chief Fire Officer working very closely with the District Disaster Manager and playing a leading role in the forum that has been established. Finally, the central role of the district municipality in the prevention, management and suppression of wildfires is carried through into the National Veld and Forest Fire Act, 1998 where the Chief Fire Officer is ex officio afforded certain powers and responsibilities.

One of the fire prevention measures adopted by the National Veld and Forest Fire Act is the creation of Fire Protection Associations which has as its principal objective the development and implementation of an integrated wildfire management strategy involving both the private and public sector. In terms of section 6(2), where a municipality is a member of the Fire Protection Association, the Chief Fire Officer of the municipal fire fighting service automatically assumes the position of the Fire Protection Officer.

The roles and responsibilities of the Chief Fire Officer, acting as the Fire Protection Officer, are prescribed in section 6(1) of the National Veld and Forest Fire Act as follows:

- (a) perform the function of chief executive officer of the fire protection association;
- (b) carry out the tasks assigned to him or her by the fire protection association or its executive committee:
- (c) take control of any fire fighting in the area for which the fire protection association has been
  - (i) the veldfire is a threat to life or property; and
  - (ii) he or she is reasonably able to do so;
- (d) enforce the rules of the association;
- (e) monitor and report to the association and the Minister on compliance with this Act;
- train the members in the law regarding veldfire prevention, management and control:
  - (i) on the rules of the fire protection association;
  - (ii) to prevent and fight veldfires; and inspect the members' land to ensure that they are complying with their duties in terms of the Act and the rules of the Fire Protection Association.

#### Fire Protection Associations in the xxx District

Over the last 10 years, there has been a concerted drive to establish Fire Protection Associations in the Cape xxx. A number of Fire Protection Associations have been established and registered in terms of the National Veld and Forest Fire Act with boundaries largely corresponding with those of the local municipalities, including FPA's in Stellenbosch, part of the Drakenstein, the Witzenberg, the Ceres/Tulbagh and the Breede River Valley. The development of these FPAs has been largely ad hoc and with differing degrees of success.

In the course of 2013, a review, funded by the Global Environmental Facility, was conducted by independent consultants of all FPAs in the Western Cape. The consultants were charged with developing recommendations in order to achieve the institutional and financial sustainability of FPAs throughout the province and in the Cape xxx and Overberg in particular.

#### Recommendations of Independent Consultants in relation to xxx District

In September 2013 the consultants published their initial findings which included the following:

- In order to facilitate state funding flows and the statutory responsibilities of Chief Fire Officers, FPA's should not straddle the boundaries of District Municipalities.
- Many FPAs, including those located within the xxx District, are not functioning optimally or
  discharging their statutory obligations. Part of the reason for this is that they are too small to secure the
  institutional and financial support of government provided, inter alia, through the Working on Fire programme,
  of the Department of Environmental Affairs. The inability of the smaller FPAs to leverage state support is best
  illustrated by the fact that the Southern Cape FPA, which covers the entire Eden District, enjoys 12 fully or part
  funded management positions, whilst within the xxx District, there is not one.
- In order to better leverage state funding, to achieve economies of scale and to rationalise resources the
  consultants have recommended that the FPAs in the xxx District be consolidated into a single FPA covering the entire district. This would accord with a similar trend in the xxx District and xxx District.
- Fire Protection Associations require **dedicated management capacity** which should consist of at least an FPA manager and an FPA administrative assistant. This will enable the Fire Protection Association to assist the Chief Fire Officer in the discharge certain of the responsibilities prescribed in section 6(1) of the National Veld and Forest Fire Act.

The recommendations of the independent consultants have already been adopted by most of the FPAs operating in the xxx District and a process of consolidation of these FPAs into a single FPA, called the xxx FPA, has already commenced.

#### Requirements of the XXXX Fire Protection Association

In order to give effect to the recommendations the following measures are proposed:

- The Chief Fire Officer recommends that the council of the xxx District endorses the recommendations of the independent consultants.
- 2. The District Municipality engage the xxx FPA to provide certain of the services that would normally fall to the Chief Fire Officer in terms of section 6(1) of the National Veld and Forest Fire Act.

December 2013

#### TOOL 13: FIRE MANAGEMENT UNIT PLANNING TEMPLATE

#### FIRE MANAGEMENT PLANNING GUIDE

#### Fire Management Plan (FMP) Template

This document is intended as a guide document and not prescriptive in any way.

#### Purpose of an FMP

The fire management planning process and requirements may differ among agencies. However, for all agencies, a common purpose of a fire management plan is to provide decision support to aid managers in making informed decisions. The FMP includes a concise summary of information organised by fire management unit (FMU) or units.

The fire management plan also contains strategic and operational elements that describe how to manage applicable components such as response to unplanned ignitions, hazardous fuels and vegetation management, burned area emergency stabilisation and rehabilitation, prevention, community interactions and collaborative partnerships roles, and monitoring and evaluation programs.

#### Purpose of the Inter-agency Fire Management Template

The purpose of the interagency fire management plan template is to provide a framework to facilitate cooperation across administrative boundaries. The FMP has different detail depending upon area complexities, agency need and direction.

#### Introduction 1.

The intent of this chapter is to introduce the reader to the area covered by the FMP. State the reasons for developing the FMP. Provide a general description of location of the area covered by the FMP with vicinity map and agencies involved. Briefly describe land ownership, significant resources, mission or direction for the area and different management areas (e.g. fynbos, agricultural, natural or commercial forest, and urban interface) for agencies participating in the planning effort.

#### 2. Policy and Partnerships

The intent of this chapter is to establish the linkage between higher level planning documents, legislation and policies and the actions described in the document.

- 2.1 Fire Policy
  - Identify sources of guidance and direction that relate to actions described in the FMP. These include: inter-agency and departmental policy (e.g. departmental manuals), agency specific policies (e.g. manuals, strategic plans), and bylaws.
- 2.2 Land/Resource Management Planning (LMP) Identify documents that relate to the area covered by the FMP including interagency efforts. Examples include: land management plans, comprehensive conservation plans.
- Identify any internal and external fire management partnerships or planning teams that helped you develop this FMP. This information documents the level of cooperation occurring.

#### 3. Fire Management Unit Characteristics

The intent of this chapter is to articulate specific objectives, practices and considerations common to all FMUs and unique to individual FMUs.

The primary purpose of developing FMUs in fire management planning is to assist in organising information in complex landscapes. The process of creating FMUs divides the landscape into smaller geographic areas to more easily describe physical and social characteristics. The following sections provide guidance on what to include in this chapter.

Area-wide Management Considerations

The intent of this section is to document overall veldfire management program guidance and characteristics common to all FMUs. Describe fire management related goals, objectives, standards, guidelines, and/or desired future conditions as found in the appropriate LMP(s) that apply across all FMUs. Include fire management related goals that may come from non-fire program areas within the LMP or other planning documents.

#### 3.2 Fire Management Unit-Specific Descriptions

The intent of this section is to describe the characteristics of the FMU. Examples are: Physical description of FMU (e.g. topography, fuel types, special conditions that may result in extreme fire behaviour, access, high value concerns, special areas); jurisdictional boundaries; other values at risk within and adjacent to FMU; previous fire behaviour; and weather descriptions.

Operational information may be detailed or added as an appendix, such as: Permanent repeater locations; radio frequencies; radio 'dead spots'; communication plan; evacuation plan; water fill sites; and helicopter landing spots.

#### 4. Veldfire Operational Guidance

The intent of this chapter is to document the procedures used in the area covered by the FMP to implement the veldfire management program.

#### 4.1 Appropriate Management Response

Describe procedures that should be in place for planning and responding to fires. Procedures to be included are dependent on local and inter-agency agency needs.

#### Examples include:

- preparedness (including training, qualifications, readiness, detection and aviation)
- · cooperative or mutual aid fire management agreements
- · cost apportionment agreements
- · protection agreements
- · cross-boundary fire agreements
- size up, initial response and extended response procedures
- · dispatching/obtaining resources
- · prioritising allocation of resources
- · large fire cost management
- public interaction and media policies
- · reporting requirements

#### 4.2 Prevention and Education

Describe or reference veldfire prevention and education strategies. Procedures to be included are dependent on local agency needs.

#### Examples include:

- human-caused ignition patterns and problems
- · fire investigation policies and procedures
- burn permit systems
- · law enforcement procedures and agreements
- · community involvement
- · education programs
- memorandum of understanding (MOU)

#### 5. Monitoring and Evaluation

The intent of this chapter is to document processes for determining whether the FMP is being implemented as planned and fire-related goals and objectives are being achieved. Information obtained from monitoring and evaluations is used to update the FMP. Describe monitoring processes that will be used to measure achievement of FMP objectives.

#### Glossary

[Include a glossary for common terms. Include full definition for agency or unit specific terminology.]

Appendices [Optional]

## TOOL 14: BILATERAL LANDOWNER AGREEMENT

#### **BILATERAL LANDOWNER AGREEMENT**

MADE AND ENTERED INTO BY AND BETWEEN

XXXXXXXXXXXXX
Herein represented by
in his/her capacity as
(Hereinafter referred to as)
and
XXXXXXXXXXXXX
Herein represented by
in his/her capacity as
(Hereinafter referred to as the Owner)
RECITAL
WHEREAS XXXXXXXX is managing the XXXXXXXX Farm / Estate wherein is included
(describe the property) as delineated in Annexure A;
AND WHEREAS the Owner owns
(describe the property) as delineated in Annexure A, adjoining XXXXXXXX;
WHEREAS in terms of the Act every owner on whose land a veldfire may start or burn or from whose land it may spread must prepare and maintain a firebreak on his or her side of the boundary between his or her land and any adjoining land;
<b>AND WHEREAS</b> XXXXXX and the Owner applied to the Minister for an exemption from the duty to prepare and maintain firebreaks as envisaged in the Act;
AND WHEREAS the Minister granted such exemption to the Owner and XXXXXXX;
Page 1

#### NOW THEREFORE the Parties agree as follows:

#### 1. INTERPRETATIONS AND PRELIMINARY

The headings of the clauses in this Agreement are for the purpose of convenience and reference only and shall not be used in the interpretation of nor modifying nor amplifying the terms of this Agreement nor any clause hereof. Unless a contrary intention clearly appears:

- 1.1 words importing:
  - 1.1.1 any one gender includes the other two genders;
  - 1.1.2 the singular include the plural and vice versa; and
  - 1.1.3 natural persons include created entities (corporate or unincorporated) and vice versa and the State, should the context so require;
- 1.2 the following terms shall have the meanings assigned to them hereunder and cognate expressions shall have a corresponding meaning, namely:
  - 1.2.1 "Act" means the National Veld and Forest Fire Act, 1998 (No 101 of 1998);
  - 1.2.2 "Agreement" means this Agreement together with the annexures attached hereto;
  - 1.2.3 "Effective Date" means ......;
  - 1.2.4 "Minister" means the Minister of Agriculture, Forestry and Fisheries;

  - 1.2.6 "**Properties**" mean the respective properties of XXXXXX and the Owner as delineated on the attached plan, marked Annexure "A",
  - 1.2.7 "xxxxx" means the xxxxx Farm / Estate;
  - 1.2.8 "Signature Date" means the date of signature of this Agreement by the last signing Party;
- 1.3 any reference to an enactment is to that enactment as at the Effective Date and as amended or re-enacted from time to time;
- 1.4 if any provision in a definition is a substantive provision conferring rights or imposing obligations on any Party, notwithstanding that it is only in the definition clause, effect shall be given to it as if it were a substantive provision in the body of this Agreement;
- 1.5 when any number of days is prescribed in this Agreement, same shall be reckoned exclusively of the first and inclusively of the last day unless the last day falls on a Saturday, Sunday or Public Holiday, in which case the last day shall be the next succeeding day which is not a Saturday, Sunday or Public Holiday;
- 1.6 where figures are referred to in numerals and in words, if there is any conflict between the two, the words shall prevail;
- 1.7 expressions defined in this Agreement shall bear the same meanings in schedules or annexures to this Agreement which do not themselves contain their own definitions;
- 1.8 where any term is defined within the context of any particular clause in this Agreement, the term so defined, unless it is clear from the clause in question that the term so defined has limited application to the relevant clause, shall bear the meaning ascribed to it for all purposes in terms of this Agreement, notwithstanding that term has not been defined in this interpretation clause;
- 1.9 unless expressly provided as being in the sole discretion of a Party, where approval, acceptance, consent or action by a Party is required under this Agreement, such approval, acceptance, consent or action shall be in writing and shall not be unreasonably delayed or withheld;
- 1.10 all references to annexures and schedules are references to the annexures and schedules annexed to this Agreement;
- 1.11 the expiration or termination of this Agreement shall not affect such of the provisions of this

Agreement as expressly provide that they will operate after any such expiration or termination or which of necessity must continue to have effect after such expiration or termination, notwithstanding that the clauses themselves do not expressly provide for this; and

1.12 in the event of any conflict or ambiguity between the expressions and/or provisions of this Agreement and any annexures or schedule thereto, this Agreement shall govern.

#### 2. DURATION OF AGREEMENT

This Agreement, regardless of the Signature Date, commences on the Effective Date, and shall, subject to clauses 3 and 7, remain in force for an indeterminate period.

#### 3. NON-PREPARING AND MAINTAINING OF FIREBREAKS

- 3.1 The Parties have in terms of section 15 of the Act applied to the Minister to exempt them from the preparing and maintaining of a firebreak or firebreaks as envisaged in the Act.
  - 3.1.1 The Minister has granted the parties a conditional exemption, see Annexure "B" attached hereto, or
  - 3.1.1. The Minister has granted the Parties an unconditional exemption, see Annexure "B" attached hereto.
- 3.2 The Parties agree to comply with the conditions as indicated in Annexure "B".
- 3.3 The Parties shall not institute any claim for damages against each other in respect of the non-preparing and maintaining of a firebreak or firebreaks as envisaged in the Act, unless a loss or claim arises as a result of a wilful or negligent act by the other Party and/or its employees, contractors or agents.

#### 4. TERMINATION

Either party shall in its sole discretion at any time have the right to terminate this Agreement by giving to the other party six (6) months written notice of its intention.

#### 5. ASSIGNMENT

Neither Party to this Agreement shall cede and/or assign their rights in terms of this Agreement without the prior written consent of the other Parties to this Agreement, provided that such consent shall not unreasonably be with held.

#### 6. INDEMNITY

- 6.1 The Parties indemnify each other and keep each other indemnified against all losses and claims for injuries or damage to any person or property whatsoever (including surface or other damage to land or crops not being on the site suffered by tenants or occupiers) which may arise out of or in consequence of this Agreement and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, unless a loss or claim arises as a result of a wilful act by the other Party and/or its employees, contractors or agents.
- 6.2 The Parties agree to assist each other and to make available to each other all documents and information necessary to defend any claim against any one or both of the parties due to the non-preparation and maintenance of a firebreak or firebreaks.

#### 7. INSURANCE

7.1 The Parties shall respectively effect, in their respective names, policies of insurance to the satisfaction of each other to cover any. damages caused by fire to any property of any third party whether caused due to a negligent act, whether directly or indirectly, by any one of the Parties and/or their employees, contractors or agents with a registered insurer and shall continue such insurance for the duration of this Agreement and shall, when required, produce to the other Party such policy of insurance and the receipt for payment of the current premium.

#### 8. BREACH

8.1 Should any Party to this Agreement breach this Agreement and fail to remedy such breach within 7 (seven) days of receiving written notice from the other Party requiring it to do so, then such aggrieved Party shall be entitled, without prejudice to any other rights it has in law, to cancel the Agreement to which such breach relates or to enforce specific performance of the defaulting Party's obligations, in either event without prejudice to the aggrieved Party's right to claim damages.

The Parties choose as domicilia citandi et executandi their respective addresses set out in this

#### 9. NOTICES AND DOMICILIA

	clause for all purposes arising out of or in connection with this Agreement at which addresses all processes and notices arising out of or in connection with this Agreement, its breach or termination may validly be served upon or delivered to the Parties.
9.2	For purposes of this agreement the Parties' respective addresses shall be: as regards XXXXXXX:
	Fax number: ()
	as regards the Owner:
	Fax number: ()

9.3 Any notice given in terms of this Agreement shall be in writing and shall:

concernedmay notify the others in writing.

9.3.1 if delivered by hand, be deemed to have been duly received by the addressee on the date of delivery;

or such other address, not being a post office box or poste restante, of which the party

- 9.3.2 if posted by pre-paid registered mail, be deemed to have been received by the addressee on the 8th day following the date of such posting;
- 9.3.3 if transmitted by facsimile be deemed to have been received by the addressee one day after despatch.

#### 10. AUTHORITY

Each person signing this Agreement on behalf of a Party hereto, hereby personally warrants that he/she is duly authorised to do so.

#### 11. RELAXATION

No latitude, extension of time or other indulgence which may be given or allowed by any Party in respect of the performance of any obligation hereunder or the enforcement of any right arising from this Agreement, and no single or partial exercise of any right by any Party shall under any circumstances be

construed to be an implied consent by such Party or operate as a waiver or a novation of, or otherwise affect any of that Party's right in terms of or arising from this Agreement or stop such Party from enforcing, at any time and without notice, strict and punctual compliance with each and every provision or term hereof.

### 12. REPRESENTATIONS

The Parties admit that no representations, other than those contained in this Agreement, were made leading to the entering into this Agreement.

### 13. ENTIRE AGREEMENT

This Agreement contains all the terms and conditions of the Agreement between the Parties and neither party shall be bound by any undertakings, representations or warranties not recorded herein.

### 14. NON VARIATION

No renewal, alterations, cancellations, variation, or addition to this Agreement or this clause shall be of any force or effect unless reduced to writing and signed by the Parties or their duly authorised representatives.

### 15. SEVERABILITY

In the event that any of the terms of this Agreement are found to be invalid unlawful or are unenforceable, such term(s) will be severable from the remaining terms, which will continue to be valid and unenforceable.

Signed at	_ on this	day of	20
WITNESSES:			
1			
2		XXXXXXX	
Signed at	_ on this	day of	20
WITNESSES:			
1		Ouman	
2		Owner	
Page 5			

### TOOL 15: MULTIPLE LANDOWNER AGREEMENT

### NEIGHBOUR / LANDOWNER AGREEMENT FOR CLEARING AND MAINTENANCE OF FIRE BELTS IN TERMS OF THE NATIONAL VELD & FOREST FIRE ACT 101 OF 1998

The National Veld and Forest Fire Act 101 of 1998 prescribe the following statutory landowner requirements:

### **CHAPTER 4 - VELDFIRE PREVENTION THROUGH FIREBREAKS**

- Every owner on whose land a veldfire may start or burn or from whose land it may spread must prepare and maintain a firebreak on his side of the boundary between his or her land and adjoining land.
- Neighbours must determine a mutually agreeable date or dates for burning of firebreaks and inform the fire protection association, if any.
- 3. An owner may not burn a firebreak if;
  - I. A fire protection association objects;
  - II. A warning has been published;
  - III. The conditions are not conducive to burning.
- 4. Owners of adjoining land may agree to position a common firebreak away from the boundary.
- 5. Owners must ensure that, with due regard to the weather, climate, terrain and vegetation of the area:
  - It is wide enough and long enough to have a reasonable chance of preventing a veldfire from spreading to or from neighboring land;
  - II. It does not cause soil erosion; and
  - III. It is reasonably free of flammable material capable of carrying a veldfire across it.

### **CHAPTER 7 - OFFENCES AND PENALTIES**

- 1. When the Minister has published a warning of a high fire danger, any person who lights a fire in the open air will be guilty of a first category offence. (Fine and or imprisonment of up to two years).
- 2. Any owner, occupier or person in control of land on which a fire occurs who fails to take reasonable steps to extinguish the fire or to confine it to that land or to prevent it from causing damage to property on adjoining land, is guilty of a first category offence. (Fine and or imprisonment of up to two years).
- 3. Any owner, occupier or person in control of land who leaves a fire which he has lit, unattended, is guilty of a second category offence. (Fine and or imprisonment of up to one year).
- 4. Any owner, occupier or person in control of land who fails to prepare a firebreak, give notice of intention to burn a firebreak and fails to meet the standard of readiness for fire fighting is guilty of a second category offence. (Fine and or imprisonment of up to one year).

### FIREBREAK AGREEMENT

### MADE AND ENTERED INTO BY AND BETWEEN:

herein a representative of (Farm)
in my capacity as
(Hereinafter called "THE FIRST PARTY")
and
Herein a representative of (Farm)
in his capacity as
(Hereinafter called "THE OTHER PARTY")
(The above referred to as "The Party"/"The Parties")
IT IC ACREED THAT
IT IS AGREED THAT  The Parties will annually clear and thereafter maintain fire belts along the common boundary between their respective properties, or agreed to area, as described hereunder:-
and
on the following terms and conditions:
Page 2
-o

1.	The said fire belts will be reasonably free of flammable material capable of carrying a veldfire across it, including logs, and also where possible, tree stumps, to a width of
	*Delete where not applicable.
2.	The costs of clearing, and thereafter maintaining, the said fire belts will be borne by the two parties in equal

- shares, which will be effected by one or more of the following means:
  - \*(a) By each Party clearing and maintaining the fire belt on his side of the common boundary.
  - \*(b) By the parties each clearing and maintaining ...... meters wide belts along those sectors of the common boundary, of approximately equal length, as indicated on the annexed sketch plan.
  - \*(c) By one Party, namely ...... clearing and maintaining the said ..... meter wide fire belt along the entire common boundary, and by the other Party, namely ......, paying a half share of the costs of such clearance and maintenance upon presentation of an invoice by the said .....
  - \*(d) By one Party, namely ....., making labourers available to the other party, namely ....., for the clearance and maintenance of the said fire belts under the supervision of the said owner or his representative.
  - \* Delete where not applicable.
- 3. By no later than the 15th day of ......[month] in every year the Parties shall by agreement set a future date on which, weather permitting, fire belt clearance, as set out above, will commence, and they shall further agree on alternate date/s of commencement in the event of weather conditions being unfavourable. Should the Parties fail to reach such agreement by ...... in any year, then either Party will be entitled to give the other Party at least 7 days, and not more than 21 days, written notice of such commencement dates and of the dates of completion of fire belt clearance. Such fire belt clearance shall have been completed by no later than the date determined by the local fire protection association or by the applicable Municipal by-laws, all of which dates are agreed to be binding on both Parties.
- Should either Party fail to carry out his obligations within the specified periods, then the other Party will be entitled, in his discretion, to carry out the clearing and/or maintenance work on behalf of the defaulting Party, and may recover the reasonable costs thereof from the defaulting Party.
- 5. Where any part of the fire belt shown on the attached sketch plan (which is to be cleared and maintained) falls within or adjoining a road reserve of a public road, the Party responsible for the supervision of that part of the fire belt shall endeavour to obtain the necessary authorisation from the national, provincial or local authority to burn the road reserve and take all necessary precautions for the protection of any members of the travelling public using the said public road. The measures to be taken shall be recorded each year as part of the supplementary agreement mentioned in paragraph 3 above.
- Both Parties agree and acknowledge that this Agreement and the conduct regulated hereunder is concluded subject to the provisions of the National Veld and Forest Fire Act No 101 of 1998 and all other applicable legislation.
- Both parties agree that for so long as they share a common boundary and there is no change to the location and/or position of the common boundary firebreak, that this agreement will remain effective and in place until a replacement or new agreement is signed between the parties. This agreement is not transferable to any other party.

THUS DONE AND SIGNED atundersigned witnesses:	on this	day of	20	in the presence of the
AS WITNESSES:				
I				
2		("THE FIRST PARTY")		
THUS DONE AND SIGNED atundersigned witnesses:	on this	day of	20	in the presence of the
AS WITNESSES:				
l				
2	•••••	("THE OTHER PARTY")		
LANDOWNERS PERMISS	SION / CO	ONSENT TO BURN IN	I THEIR AI	BSENCE
I		. as the (Owner/Man	ager/Repre	esentative)
Giveoperations in my/our absence.		. permission to carry	out the fol	lowing burning
Trace line preparation by way of burning				
Firebreak burning				
I will not holdgetting out of control and causing damage (in under control) or injury to any property, pers		any related fire fighting	costs in att	
THUS DONE AND SIGNED at of the undersigned witnesses:	on this	day of	20	in the presence
AS WITNESSES :				
I				
2				
Page 4				

Annexure 1 - Firebreak sketch plan		
Name	Name:	
	Signature:  Date:	
	Dutc	Page 5

### COLLECTIVE LANDOWNERS FIRE MANAGEMENT AND FIREBREAK AGREEMENT

AGREEMENT FOR CLEARING AND MAINTENANCE OF FIREBREAKS IN TERMS OF THE NATIONAL VELD & FOREST FIRE ACT 101, 1998, AND WITHIN THE .......FIRE PROTECTION ASSOCIATION AREA OF OPERATION

Ag	reement entered into between	
1.		and
2.		and
3.		and
4.		and
5.		
	heir capacities as registered Landowners and / or Lar perties known as	
& F witl	ereas the above parties desire to collectively enter into orest Fire Act 101 of 1998 concerning the clearing and hin the area per the attached diagram and as common nexure A).	maintenance of firebreaks for fire protection purposes
IT I	IS AGREED AS FOLLOWS:	
1.	The parties acknowledge that they are all fully paid m Fire Protection Association and have read and unders	embers of thetood the Rules and Regulations of such Association.
2.		e properties and that any portion of the firebreak that e "collective" boundary fence, will be clearly indicated ure A), which sketch map, for all intent and purposes, also be signed by the neighbouring landowners of the
3.		y and all internal firebreaks within the collective for grass management purposes. The parties agree that it is not surrounded by a burnt or bare earth firebreak.
4.	FPA, as amended from time to time, in the following n work will commence on approximately(	n the Rules and Regulations of thenanner, namely: by burning such firebreak and that the date) and will be completed on or beforeeaks (tracer lines etc.) will be carried by the Landowners
5.	The parties acknowledge that each has (or collectively personnel in accordance with	FPA standards, to burn the said firebreaks and the clearing and maintenance of the said firebreak(s) if done
6.	in accordance with the National Veld & Forest Fire Ac	enance of the firebreak is the responsibility of the parties t 101 of 1998 and per the rules set by the
	agreement no one party will institute any claim agains members of the Fire Protection	
age (	6	

originated as a result of any act by the other party during such clearing or maintenance of the firebreaks. The Parties are the responsible parties with regard to the collective boundaries and will be held jointly and severally liable with regard to any possible consequences caused by the spread of fire from the collective boundary. This clause must be read in conjunction with the Presumption of Negligence clause per the National Veld & Forest Fire Act 101 of 1998, and signature hereto by the parties reflects full understanding of this clause.

- 7. The parties acknowledge that by signature hereto they may, as the collective parties, be held joint and severally liable for the spread of fire from the collective boundaries.
- 8. If any one of the parties neglects or fails to fulfil his / her obligations in terms of this agreement, and in terms of the stipulated notice periods as set out in the National Veld & Forest Fire Act 101 of 1998, the affected party and /or landowner may proceed with the clearing or maintenance of the firebreak and recover from the former party the agreed share of the cost of such clearing and maintenance.
- 9. This agreement commences on the date of signature hereof by all parties and remains in force for an unspecified period from the date of signature, provided, however, that the agreement can be amended in writing with the consent of all parties, or there is change in ownership.
- 10. Should any one party wish to terminate this agreement, it must be done in writing, providing 14 days notice and such notice delivered to each of the other parties. Termination by any one party cannot be executed during 1 May 31 October of each year as this would impact the collective firebreak agreement.
- 11. Should any party sell their property, the purchaser must be made aware of this agreement and if the property is transferred between ............. [day/month] ............. [day/month] of each year the purchaser will be required to take on the responsibilities of this agreement as the new landowner.

12. This agreement is governed by the laws of South Africa.

13. The parties choose as their domicilii citandi et executandi the following: 1 ..... 2. ..... 3. ..... 5. ..... SIGNATURE **SIGNATURE** ID No: ..... ..... **SIGNATURE** SIGNATURE NAME: NAME: ID No: AS WITNESSES: L ..... 2. .....

### TOOL 16: FIREBREAK EXEMPTION APPLICATION (INDIVIDUALS)

### APPLICATION FOR EXEMPTION FROM THE DUTY TO PREPARE AND MAINTAIN FIREBREAKS IN TERMS OF SECTION 15 OF THE NATIONAL VELD AND FOREST FIRE ACT (ACT 101 OF 1998).

### **SECTION A: PERSONAL DETAILS**

1 Curnomo		
1. Surname		
2. Initials		
3. Title		
4. Postal address		
5. Physical address (if different to postal)		
6. Property Name & number		
8. Property/Farm size (ha)		
9. Name of FPA (if any)		
10. Telephone & Fax	H:	W:
io. Telephone & rax	F:	
11. Cellphone		
12. Email address		
13. Signature		
14. Date		
age 1	1	

### SECTION B: UNDERSTANDING THE PURPOSE OF THE EXEMPTION APPLICATION:

### B1: As the applicant I understand that under the National Veld and Forest Fire Act (No 101 of 1998):

- a) Section 12(1) obliges landowners to establish firebreaks on the boundaries of their properties.
- b) Section 12(7) states that owners of adjoining land may agree to position a common firebreak away from the common boundary.
- c) In terms of Section 15(1) the Minister may allow certain exemptions for a landowner or group of landowners from the creation of boundary firebreaks where there is **good reason** to do so.
- d) Section 15(2) states that this exemption may also be conditional.

### B2: As the applicant I also understand that:

- a) When receiving exemption from the Minister it does not exempt me from the responsibility as landowner/user to prevent a fire from starting or spreading from or over my farm/property.
- b) The exemption does not transfer my responsibility on to any neighbour, the Fire Protection Association, local or national authority to prevent a fire from starting or spreading from or over my farm/property.
- c) This application not to make or move the firebreak to an alternative position is for a practical, economical and environmental reason and not to avoid the responsibility to prevent or combat fires on my farm/property.
- d) That I will undertake to maintain the condition of the action plan which include the reasons for exemption / positioning of firebreak.
- e) That it is my duty to inform any Third Party that may be affected by this application and the outcome thereof.

B3. The neighbours that have signed in section C understand the reason for this application, and that it

f) That the Department of Agriculture, Forestry and Fisheries shall not be held liable for any damages/losses that may arise as a result of fire after the exemption was granted.

may have an impact on their preparednes	s in the event of a fire.	
THUS DONE AND SIGNED at	on this day of	20
NAME	SIGNATURE	

FYNBOSFIRE ® T65

	5 years on your property?	D1.2 How many have crossed from your farm or over your farm to a neighbour's farm?	your farm or over your	
<b>D1.3</b> Name some the possible causes /origin of				
these fires				Value lost because of fires
<b>D1.4</b> Name some of the consequences of these fires				
D2.1 The date of last fire on your property	D2	D2.2 Did this fire cross over onto a neighbour's property $\ensuremath{?}$	neighbour's property?	
D2.3 Was there a firebreak on the boundary?	D2	D2.4 If no, would a firebreak have been of any assistance?	een of any assistance?	
D2.5 If there was a firebreak, why did it possibly help/not help?	-			
D2.6 If this firebreak was placed in a different				
position than your boundary, would it have been more effective? (Give a reason.)				
D3.1 How many major fires caused damage/loss to 5 or more farms during the same fire in your ward / agriculture area in the last 30 years?	to 5 or more farms during the sar	me fire in	D3.2 How many of these had caused damage to your farm/property?	e had farm/
D3.3 When was the last major fire?	D3.4 How big was this fire.		D3.5 Any loss of life at this fire?	this
D3.6 Did landowners work together in an organised manner at this fire?	sed manner at this fire?	D3.7 Dic fire?	D3.7 Did you take part in fighting this fire?	this
<b>D3.8</b> In few words give the main reasons why this fire caused so much damage.				

## SECTION E: BACKGROUND INFORMATION ABOUT FARM / PROPERTY

E1 Give % of total area of farm under the	ler the following	following heads to form a picture of your farm /property and activities	farm /property a		Indicate what the neighbours are farming with	ours are
E1.1 Topography of farm		E1.2 Natural Vegetation types	E1.3	E1.3 Type of farming		
Mountains with steep slopes		Grasslands	Game	Game farming		
On the side of a mountain slope		Savannah bushveld	Harve	Harvesting of natural vegetation	tion	
Bottom of a valley		Kalahari bushveld	Grass	Grassing on natural vegetation	uo	
Hilly country side		Valley bushveld & thicket	Grass	Grassing on planted vegetation	lon	
Hilly country with deep ravines		Forests	Dry k	Dry land crops		
Flat country side		Karoo	Land	Land crops under irrigation		
		Succulent Karoo	Orchi	Orchards and vineyards		
		Fynbos	Orch	Orchards/vineyards with mulching	ılching	
E2 Weather patterns		Renosterveld	Suga	Sugarcane plantations		
Average rainfall	mm	Transformed land	Timb	Timber plantations		
Average humidity in fire season	%		Crop	Crops under cover (tunnel & nets)	nets)	
Average temperature in fire season	၁.		Feed	Feed lots / poultry		
When is the normal dry season			Infras	Infrastructure (housing, stores etc)	es etc)	
Prevailing wind direction						
Prevailing wind in fire season			Touris	Tourism (just B & B )		
Average wind speed fire season	km/h		Touri	Tourism (ex hiking trail, horsetrail picnic spots, view points, etc.)	etrail picnic spots,	

### SECTION F: REASON FOR APPLICATION FOR EXEMPTION

F1: This application for exemption will normally fall under these main points i.e. a practical, economical and/or environmental reason. F3.2 Firebreak as set out in action plan (sec F2) Area of last fire and wind direction (sec D2) F3 Provide at lest the following 2 maps -3.1 Map showing neighbours (sec C) The firebreak with last fire (sec D2) Assets of high value (Sec F2) Prevailing wind (Sec E2) Water points (sec F2) Give a short summary of why it's not possible for you to have Firebreak on your farm/property boundary. How other burning operations will be handle like Position of firebreak (show on map), width Protection of Infrastructure from veldfires block burns, high fuel loads of slash etc. Reason for position of firebreaks Method of preparing firebreak F2 Attach an Action Plan to this application which cover the following aspects Possible fire hazard that threatens from inside or Fire fighting capacity (including personnel) Personal detail & Signing off of document Description of topographic, vegetation Water points (that is available for use) Assets that need to be protected Outside resource available outside the farm boundary Weather patterns

### APPLICATION BY A GROUP OF LANDOWNER/USERS FOR EXEMPTION FROM THE DUTY TO PREPARE AND MAINTAIN FIREBREAKS IN TERMS OF SECTION 15 OF THE NATIONAL VELD AND FOREST FIRE ACT (ACT 101 OF 1998).

		and understand what Section B state	
he signing da ne implemen		ffice of the Department of Agriculture	e, Forestry and Fisheries will be
No.	Farm name	Member name	Signed
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

### SECTION B: Understanding the purpose of the exemption application

### B1: As a signing member of this document I understand that under the National Veld and Forest Fire Act (No 101 of 1998):

- a) Section 12(1) obliges landowners to establish firebreaks on the boundaries of their properties.
- Section 12(7) states that owners of adjoining land may agree to position a common firebreak away from the common boundary.
- c) In terms of Section 15(1) the Minister may allow certain exemptions for a landowner or group of landowners from the creation of boundary firebreaks where there is **good reason** to do so.
- d) Section 15(2) states that this exemption may also be conditional.
- e) In terms of Section 15(3) the Minister will consult the FPA before granting any exemption.

### B2: As a signing member of this document I also understand:

- a) When receiving exemption from the Minister it does not exempt me from the responsibility as landowner/user to prevent a fire from starting or spreading from or over my farm/property.
- b) The exemption does not transfer my responsibility on to any neighbour, the Fire Protection Association, local or national authority to prevent a fire from starting or spreading from or over my farm/property.
- c) This group application to not to make; or move the firebreak to an alternative position is for practical, economical and environmental reasons and not to avoid the responsibility to prevent or combat fires on my farm/property.
- d) That I will undertake to maintain the condition of the action plan which include the reasons for exemption/positioning of firebreak.

### B3: As a signing member of this document I also agree to the following clauses:

- a) The Parties indemnify each other and keep each other indemnified against all losses and claims for injuries or damage to any person or property whatsoever (including surface or other damage to land or crops not being on the site, suffered by tenants or occupiers) which may arise out of or in consequence of this Agreement and against all claims, demands, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, unless a loss or claim arises as a result of a wilful act by the other Party and/or its employees, contractors or agents.
- b) The Parties agree to assist each other and to make available to each other all documents and information necessary to defend any claim against any one or both of the parties due to the non-preparation and maintenance of a firebreak or firebreaks, unless a loss or claim arise as a result of a wilful or negligent act by the other Party and/or its employees, contractors or agents.
- c) The Parties shall respectively effect, in their respective names, policies of insurance to the satisfaction of each other to cover any damages caused by fire to any property of any third party (including the other Party) whether caused due to a negligent act, whether directly or indirectly, by any one of the Parties and/or their employees, contractors or agents with a registered insurer and shall continue such insurance for the duration of this Agreement and shall, when required, produce to the other Party such policy of insurance and the receipt for payment of the current premium.
- d) That it is my duty to inform any Third party that may be affected by this application and the outcome thereof.
- e) That the Department of Agriculture, Forestry and Fisheries shall not be held liable for any damages/losses that may arise as a result of fire after the exemption was granted.

as Chairman of the		he FPA with the Executive Committee of the said FPA, this application for exemption for the said members listed in Section C and signed under
NAME  SIGNATURE  OR (delete which is not applicable)  As the appointed official of the Department of Agriculture, Forestry and Fisheries, I agree with this application for exemption to make Firebreak as set out in this document by the group landowners/users listed in Section C and signed under Section A.  SIGNED at	SIGNED at	on this day of 20
NAME SIGNATURE  OR (delete which is not applicable)  As the appointed official of the Department of Agriculture, Forestry and Fisheries, I agree with this application for exemption to make Firebreak as set out in this document by the group landowners/users listed in Section C and signed under Section A.  SIGNED at	as Chairman of the	FPA
As the appointed official of the Department of Agriculture, Forestry and Fisheries, I agree with this application for exemption to make Firebreak as set out in this document by the group landowners/users listed in Section C and signed under Section A.  SIGNED at	NAME	
exemption to make Firebreak as set out in this document by the group landowners/users listed in Section C and signed under Section A.  SIGNED at	OR (delete which is no	applicable)
as the appointed official of the department of Agriculture Forestry, and Fisheries	exemption to make Fire	ebreak as set out in this document by the group landowners/users listed in Section C and
	SIGNED at	on this day of
	TV WIL	CIGIVITORE
	Page 3	

1. Surname 2. Initials 3. Title 4. Postal address (if different to postal) 6. Farm name & number(s) 7. Farm Size (ha)	NEIGHBOUR 2	NEIGHBOUR 3	NEIGHBOUR 4
8. Ward name			
9. Telephone			
10. Fax no.			
11. Cell phone			
12. Email address			

### **NEIGHBOUR 4 NEIGHBOUR 3** Add more pages if there are more neighbours bordering onto the applicant's property than this page provided for. a) All fields must be completed if applicable b) To Indicate the properties of neighbours on map 1 **NEIGHBOUR 2 NEIGHBOUR 1** SECTION C: DETAILS OF GROUP MEMBERS 6. Farm name & number(s) Physical address (if different to postal) Postal address 12. Email address Farm Size (ha) Ward name 11. Cell phone Telephone Surname 10. Fax no. Initials Title ÷ 4. 6 ж . ω. 2 5. ۲. Page 5

	NEIGHBOUR 1	NEIGHBOUR 2	NEIGHBOUR 3	<b>NEIGHBOUR 4</b>
Surname				
2. Initials				
Title				
Postal address				
Physical address (if different to postal)				
Farm name & number(s)				
Farm Size (ha)				
Ward name				
9. Telephone				
10. Fax no.				
11. Cell phone				
12. Email address				

D1.1 How many fires have there been in the last 5 year in group area.  D1.3 Name some of the possible causes / origins of these fires.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.5 The date of the last fire that crossed a border.  D1.6 The date of the last fire that crossed a border.  D1.6 The date of the last fire that crossed a border.  D1.6 The date of the last fire that crossed a border.  D1.6 The date of the last fire that crossed a border.  D1.6 The date of the last fire that crossed is fire that position than the farm boundary, would it have been more effective?  D2.1 How many major fires caused damage/loss to 5 or more farms during the same fire in your ward ward in the last 30 year?  D2.2 Da average how many in your ward ward in the last 30 year?  D2.5 Did landowner/users work together in an organised way to fight this fire?  D2.6 Did landowner/users words give the main reasons  M1 this fire caused so much damage.  D2.8 In a few words give the main reasons  D2.9 In a few words give the main reasons  D2.9 In a few words give the main reasons  D2.9 In a few words give the main reasons  D2.9 In a few words give the main reasons  D2.9 In a few words give the main reasons  D2.9 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D3.0 In a few words give the main reasons  D					
than referrms during the same fire in your bound be affected by the move through the area?    D2.2 On average how nowell the area?   D2.5 Any loss of life at both of this fire?   D2.5 Any loss of life at both of the space is inadequate to make your point clear.	<b>D1.1</b> How many fires have there been in the last 5 year in group area.		.2 How many had crossed fror	n one farm to another ?	
than  r more farms during the same fire in your  by Mas there a firebreak on  by Mas this fire?  by Was this fire?  by Was this fire?  by Was this fire?	D1.3 Name some of the possible causes /origins of thes	Đị.		Value lost due to fi	Se
not than  r more farms during the same fire in your  D2.4 How big was this fire.?  bd way to fight this fire?  fithe space is inadequate to make your point clear.	fires.				
than r more farms during the same fire in your  D2.4 How big was this fire.?  ad way to fight this fire?  fithe space is inadequate to make your point clear.	D1.5 The date of the last fire that crossed a border.	D1.	.6 Was there a firebreak on th	e boundary?	
than r more farms during the same fire in your  D2.4 How big was this fire.?  ed way to fight this fire?	D1.7 If no, would a firebreak have been of any help?				
r more farms during the same fire in your  D2.4 How big was this fire.?  ed way to fight this fire?	<b>D1.8</b> If there was a firebreak, why did it possibly help / rhelp?	not			
is caused damage/loss to 5 or more farms during the same fire in your lajor fire?  S work together in an organised way to fight this fire?  The main reasons and damage.  With these reference points if the space is inadequate to make your point clear.	<b>D1.9</b> If this firebreak was placed in a different position the farm boundary, would it have been more effective.? (Give a reason.)	lan			
was this fire.?	s caused damage/	more farms during the same fire		2 On average how many in your ward buld be affected by these major fires that ove through the area?	
te to make vour point clear.	D2.3 When was the last major fire?	<b>D2.4</b> How big was this f		5 Any loss of life at this fire?	
D2.8 In a few words give the main reasons why this fire caused so much damage.  Please attach an Annexure with these reference points if the space is inadequate to make your point clear.	<b>D2.6</b> Did landowner/users work together in an organise	d way to fight this fire?	D2	.7 Over how many days did it burn?	
Please attach an Annexure with these reference points if the space is inadequate to make vour point clear.	<b>D2.8</b> In a few words give the main reasons why this fire caused so much damage.				
	Please attach an Annexure with these reference points if	the space is inadequate to mak	se vour point clear.		

# SECTION E: BACKGROUND INFORMATION ABOUT THE AREA APPLYING FOR EXEMPTION

E1 Give % of total area of farms under the	er the following	following headings to form a picture of your ward and activities.	d and activities.	
E1.1 Topography of farm		E1.2 Natural vegetation types	E1.3 Type of farming	
Mountains with steep slopes		Grasslands	Game farming	
On the side of a mountain slope		Savannah bushveld	Harvesting of natural vegetation	
Bottom of a valley		Kalahari bushveld	Grassing on natural vegetation	
Hilly country side		Valley bushveld & thicket	Grassing on planted vegetation	
Hilly country with deep ravines		Forests	Dry land crops	
Flat country side		Karoo	Land crops under irrigation	
		Succulent Karoo	Orchards and vineyards	
		Fynbos	Orchards/vineyards with mulching	
E2 Weather patterns		Renosterveld	Sugarcane plantations	
Average rainfall	mm	Transformed land	Timber plantations	
Average humidity in fire season	%		Crops under cover (tunnel & nets)	
Average temperature in fire season	၁ ့		Feed lots / poultry	
When is the normal dry season			Infrastructure (housing, stores etc)	
Prevailing wind direction				
Prevailing wind in fire season			Tourism (just B & B )	
Average wind speed in fire season	km/h		Tourism (e.g. hiking trail, horse-trails, pionic spots, view points, etc.)	

## SECTION F: REASONS FOR APPLYING FOR EXEMPTION

F3.2 Firebreak as set out in action plan (sec F2) Area of major last fire; wind direction (sec D2) F3 Provide at least the following 2 maps F3.1 Map showing neighbours (sec C) The firebreak with last fire (sec D2) Assets of high value (Sec F2) Show non-members on map F1: Due to practical, economical and/or environmental reasons this group of landowners/users hereby submits this application for Prevailing wind (Sec E2) Water points (sec F2) exemption to make firebreaks. Give a short summary of why it is not possible to have firebreaks on farm/property boundaries. How other burning operations will be handled, e.g. block Which Fire hazards threatening this group Position of firebreak (show on map), width Protection of infrastructure from veldfires burns, high fuel loads of slash etc. Reason for position of firebreaks Method of preparing firebreak F2 Attach an Action Plan to this application which covers the following aspects The FPA rules on minimum equipment requirements -ire fighting capacity (including personnel) Description of topography and vegetation **Dutside resources available to this group** Assets that need to be projected Detail of parttaking members The FPA rules on firebreaks Weather patterns Water points



### FPA OPERATIONAL GUIDELINES FOR: PLANNING, CLEARING AND MAINTAINING FIREBREAKS

A firebreak, around the perimeter of the cadastral lines of a property, is a legal requirement of all property owners and their lessees as per the National Veld and Forest Fire Act 101 of 1998.

Purpose of a perimeter firebreak: To create a reasonable change of limiting spread of fire between properties with potential life safety, economic and environmental consequences. Perimeter firebreaks also assist by creating access routes or strategic lines from which fire can be fought.

Please contact your local FPA Manager to advise you with the following:

- The acceptable width for different sections of your firebreak.
- Whether certain existing physical or man-made features can fulfil a duel role as a firebreak on your property (e.g.: a golf fairway, soccer field, parking lot etc.).
- In some cases it might be practical to move certain firebreaks to a more strategic place (e.g.: the highest road along a mountain, to the one side of a marshy area etc.), if formally agreed upon by both neighbouring property owners and their lessees.
- In some very rare cases an exemption of a firebreak might be advised, which can only be applied for though the FPA.
- Additional asset protection or strategic firebreaks you might want to put in for extra protection.

### Consideration on how to clear/ maintain your firebreak:

Most common methods of clearing / maintaining a firebreak include: chainsaw, brush-cutter, grass-cutter, hoeing, slashing and herbicide application (burning of firebreaks is not a practice utilised by most of the Western Cape).

Please give consideration to steep areas in which erosion can occur. In these areas either not all of the vegetation should be removed (e.g.: brush-cut) or alternatively plant low growing, fire resistant plants with fleshy or watery leaves such as Carpobrotus edulis (Sour Fig).

No spark generating equipment should be used to clear or maintain firebreaks (e.g.: brush-cutters or chainsaws) on Orange or Red Fire Danger Index (FDI) days.

All alien vegetation within the firebreak should be treated with herbicide, which must be immediately applied after cutting / felling alien vegetation (failure to do so will compromise the effectiveness of the herbicide).

You should be finished clearing / maintaining your firebreaks before the start of the fire season. The number of firebreaks and the speed at which you can clear or maintain it will dictate when you start preparing your firebreaks, but to be most effective, aim to only start after the bulk of precipitation, so the vegetation does not grow back before the fire season.

**FYNBOSFIRE** 

### TOOL 19: BURNING PERMIT APPLICATION FOR PRESCRIBED BURNING



### **APPLICATION**

Making progress possible. Together.			
	rn combustible material		e AIR QUALITY MANAGEMENT al) in terms of Sub-section
Directorate: City Health Air Quality Management PO Box 2815 CAPE TOWN 8000		Tel: (021) 590-5200 Fax: (021) 590-5215 E-mail: Bronwyn.Davidso	on@capetown.gov.za
Name of applicant:			
Address:			
<b>Contact Numbers</b>	Tel:	Fax:	E-mail:
	Cell:		
SECTION 1 - DETAILS C	F PREMISES WHERE THE	PROPOSED BURNING IS	TO TAKE PLACE
Cadastral unit/ Erf No:			
Street Address:			
Suburb:			
Owner of premises:			
I.D No:			
Physical Address:			
Municipal Rates Account	No:		
Postal Address: (To which account must b	e rendered)		
SECTION 2 - TYPE OF	BURN		
<ul><li>2.1 Type of burn. (<i>Please</i> 2)</li><li>1. □ Prescribed / Ecolog</li><li>3. □ Agriculture</li></ul>	·		x / Fuel Reduction
<b>2.2</b> Are you a registered National Veld and Forest	member of the Cape Penin Fire Act? Yes No		
Failure to provide a cop	itted your 5 year Veldfire N y of the 5 year fire mana itted will result in forfeit	gement strategy and anr	nual plan of operation when
			submitted. The map must indiding properties and communities.

### **SECTION 3 - AIR POLLUTION**

### Complete the following giving concise answers and/or motivation. Use separate sheet if necessary.

- **3.1** Supply full description of the **type** and estimated **quantity** of material to be open burned, **time period** of open burning, **location** as well as the estimated **cost** of the open burning operation.
- 3.2 Does the material originate from the land where the proposed open burning is to take place?
- **3.3** Detail every alternative investigated for **reducing**, **reusing** or **recycling** the material in order to minimise the amount of material to be open burned.
- 3.4 Detail every alternative investigated, including cost for the disposal of material to be open burned.
- 3.5 Is the proposed burn site 100m away from buildings or structures?
- **3.6** Will the open burning pose a hazard and/or nuisance to human health, safety, private property or the environment? List / expand on the mitigating measures, if anticipated.
- **3.7** Have the owners and occupiers of adjacent properties been notified in writing of the details of the proposed burn and their right to object in writing to the Council within 7 days of being notified? Supply copy of notification and full details of properties notified.

financial year. Exemption is only applicable to fully paid-up ...... members. The tariff will be reviewed and may be subject to change at the beginning of the new financial year.

### **SECTION 4 - FIRE SERVICE**

- 4.1 Is the land on which the proposed burning of combustible material will take place State land, a farm, small holding or land within a proclaimed township not used for residential purposes?

  No
- **4.2** Describe the fire fighting measures that will be put in place during the proposed open burn.
- **4.3** Is the area adjacent to the proposed combustible material free of material which is likely to spread the fire?

Yes No

**4.4** For stack / fuel reduction burning, are stacks of such a size that should a sudden wind arise the fire can be easily doused using equipment on site?

Yes

No

Signature of applicant:

Date of application:

Please be advised that an inspection/certification fee of R...... (ex VAT) per 15 minutes spent on site may be applicable. Please note that the abovementioned tariff is valid for the ................................. (July – June) financial year. The tariff will be reviewed and may be subject to change at the beginning of the new financial year.

### TOOL 20: BURN INSPECTION REPORT



Address: Newlands Forest Union Ave Newlands 7700 Fax: +27 (021) 685 5944

Tel: +27 (021) 689 7438/9

E-mail: Clinton.Dilgee@sanparks.org

### Table Mountain National Park Burning Plan: Cape Point: Main Gate Entrance to the Klaasjagersberg Entrance Gate: Block Close to the Main Entrance Gate to Cape Point

The practice of conducting prescribed burning within the Table Mountain National Park (TMNP) has a twofold objective; to conserve the ecosystem and biodiversity and the reduction of potential fire hazards. Correctly executed prescribed block burns are necessary measures to ensure a mosaic burn pattern across the park in the interest of biodiversity and the timely removal of potential hazards.

This burning plan aims to highlight planned actions for the burning of one such block in the Cape Point area namely the area from the Main Entrance Gate to the Klaasjagersberg Office (both to receive a cut off line as per attached map) for burning during March/ April 2014. This is Block is the Block closest to the Main Entrance Gate to Cape Point.

### Site Description:

The site is situated close to the Main Entrance Gate to Cape Point where most of the area has a tarred surface road as the boundary. Tarred roads of suitable widths will be used with minimal trimming of road verges. The area consists of over 25 year old fynbos. Some spars areas between the koppies will be used as cut off lines but will also mean the area will have to be walked extensively on the day in order to light evenly. Resources will be dedicated to the start point which is the cut off line between Block 01 and Block 02. Ample access to the perimeter of the site but almost no vehicular access to the inner parts. Block 01 will be burnt first with Block 02 following as soon as possible afterwards.

Boundary description: (Please see attached map)

Northern Boundary: Both Plateau Rd (see map)

Southern Boundary: Internal roads

Western Boundary: Burnt Area/ Cut firebreak (spars vegetation will be used as a natural break and Block burnt

prior will act as a break). Internal road verge trimmed.

Eastern Boundary: Road brush cut 5m

### Site Preparation:

Standard site preparation will occur:

- ALL access roads to be trimmed and vegetation carried into the area
- Along the fence line a 15m firebreak to be constructed
- Along roads: verges trimmed varying 5-15m as per site description

All material cut will be spread within the area to be burnt approximately 15m away from the perimeter.

### Resources:

Although the time allocation for this burn is mid March to end April and will still be considered fire season on the peninsula; the resources to be utilised will consist of the same resources used in the suppression of wildfires for TMNP.

- · Aerial and Vehicular Resources
- All burning done before the end of April will be done with the assistance of aerial resources. Available will be
  the Table Mountain National Park vehicle fleet: 3 Mercedes Benz Unimogs, 1x 11 500L Bulk Tanker, 2 x 5000L
  4x4 Tankers, 3 x 5000L 2x4 Tankers and a 1x 2000L Tanker. An array of people transport vehicles, LDV's and a
  Command vehicle is available.
- Labour resources: Contractor teams, 2 x Working on Fires teams and the Volunteer Wildfire Services.
- Tools: an array of hand tools is standard being fire beaters and the multi rake-hoe tool. Additional equipment: drip torches, Knox scanners and all motorized equipment associated with TMNP fire suppression operations.
- Communications: all relevant staff will be issued with a trunking radio for across the board communications. Inter ground crew communications will be via monitored Zartak radio.
- Weather measuring equipment: the Volunteer Wildfire Services have a mobile weather station but handheld Kestrel machines will also be utilised during the burn for constant weather monitoring and recording
- Staff transport: transport is standard as per any other fire fighting operation.
- PPE: Personnel Protective Equipment is issued to all staff undertaking any fire fighting operation
- · Rations: these will be supplied to any staff as per Fire Management Plan
- Hydrant allocation:
  - Along main entrance road to Cape Point (newly upgraded)
  - Plateau Rd
  - Simonstown
  - Scarborough

### **Contact List:**

Interested and affected parties to be informed before the commencement of burning is listed.

The agencies listed are as follows:

Agency	Telephone Number	Name
TMNP Newlands Fire Base	021 689 7438	Philip Prins
CoCT Fire Control	021 590 1900	Shift Supervisor/ Controller
CoCT Bellville TOC	021 957 4700/ 0861106417	Shift Supervisor
CoCT Air Quality Control	021 590 1419	M Cornelius/ P Hoza
TMNP Head office	021 712 2337	Reception
TMNP Media Manager	021 712 2337 084 356 0519	Merle Collins

### TMNP Operational staff contact details:

Agency	Telephone Number	Name
TMNP	082 401 8538	Clinton Dilgee
Cape Peninsula Enviro Ser	083 231 6822	Louis Trautman
CPFPA	082 940 2457	Pierre Gallagher
VWS	084 446 0218	Peter Wynne

### Potential Hazards:

Optimally on the day a light SE will assist with slow and controlled ignition of the area. Wet and rocky areas throughout the site will require several crew to light and the extended time it will take for ignition of the area will lend itself to wind shifts. This must be catered for on the day.

The control lines envisioned to be most at risk will be the Plateau Road boundary. Controlled igniting with reduce potential risk and the placement of resources to assist with any possible spot fires. Agreements are in place with the Working on Fire programme for mobilisation of additional labour crews from the immediate area if required. Additional aerial resources are also at the disposal of the Park as so the resources dedicated to the City.

Besides the prepared firebreaks before conducting the burning operation; ongoing weather readings will be taken and recorded using mobile weather measuring equipment.

Two possible sites for a holding/staging area has been identified: these would be the Klaasjagersberg Offices or along the access internal road called the Red Road (gravel track following the main water supply line to Cape Point.

### Incident Command Structure:

Trained and experienced staff will fulfil all required positions within the Incident Command Structure namely; Incident Commander: Clinton Dilgee assisted by two Sector Bosses and at least 3 Fire Bosses with a number of Crew Bosses will be on scene on the day.

For mopping up: a down scale in resources and incident status the structure will change to having a Fire Boss and Crew Leaders with crew maintaining a presence for a minimum of three days.

### **Operational Plan:**

A light SE wind (averaging >20km/h) is required on the day. Burning should ideally take place 2-3 days after rain or as soon after it as possible. This is as much a consideration for safety as it is for biodiversity requirements due to seed germination and bulb flower being synchronised with the first spring rains.

Temperatures should never be more that 25 °C and if rain is forecasted a short while after the proposed burn this would be advantageous. Forecasted rain will shorten the mopping up time and also bring some relieve for crews who monitor the area.

### Ignition procedure:

The ignition sequence is depicted by the use of numbers on the map. This indicates the sequence in which the igniting will occur:

- 1= Start of the block will be where the internal break and Plateau Road meets;
- 2= Continued along the flanks (Plateau Road and the internal break);
- 3= Flank ignitions continuing until reaching the base at;
- 4= the Base of the block to close the area.

Resource placement for this Block: A Unimog all terrain vehicle will be placed inside the fence along Plateau Road. Another vehicle will supply water and manage any spot fires along the road (this vehicle will be placed on the outside of the fence: Plateau Rd).

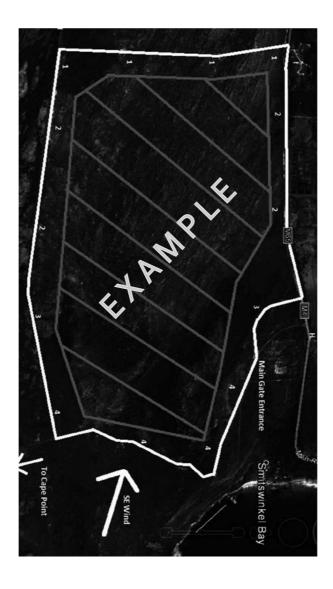
Crews utilised are the contractor firefighters, Working on Fire firefighters and the Volunteers Wildfire Services. Expected number of firefighters for this operation will be 60 for the actual burn and 20 to 32 for 3 days following for mop-up.

Mop-up after the initial burn will continue until the entire perimeter has been extinguished using wet lines. Smouldering stumps and areas harbouring hot spots that cannot be extinguished will be dedicated hand crews to monitor until extinguished.

Areas will be monitored by crews for a minimum of three (03) days after which the IC will decide when the area is

dead out.	
Written Evaluation:	

### **BURN INSPECTION REPORT - G15 MAP**



### **FIRE PROTECTION ASSOCIATION** FIRE MANAGEMENT UNIT SMOKE REPORT PLAN

SMOK	E REPORT PLAN	
No	Heading	Page
	SECTION 1: EMERGENCY PROCEDURES	
1	Emergency Contact Numbers	3
2	Actions by FMU Reaction Team	4
3	Command and Control	5
	SECTION 2: IMPORTANT INFORMATION ON THE FMU	
4	Boundary of the FMU, see attached map	6
	SECTION 3: MEMBERS INFORMATION	
5	Members Information	7
	SECTION 4: MEMBERS AVAILABLE RESOURCES	
6	Members Resources	8
	Section 5: FIRE MANAGEMENT UNIT MAP	
7	Map of the FMU (boundaries, neighbours, etc.)	9

### **SECTION 1: EMERGENCY PROCEDURES**

### **EMERGENCY CONTACT NUMBERS:** STEP 1: Call local Fire Brigade Services immediately to report the fire: (Name) Fire Brigade: ..... (number) **STEP 2:** Call/or make contact with your neighbours to report fire: (to be filled in by landowner) Neighbour 1: Neighbour 2: ..... Neighbour 3: ..... Neighbour 4: ..... STEP 3: Inform the FMU manager: Name: ..... Number: ..... **STEP 4:** FMU manager or member must contact one of the following FPA personnel: FPA Manager..... Number: ..... FPA Manager..... Number: ..... Other useful numbers: **Municipality Disaster Management** Fire Department **Police Department**

### 2. ACTION BY FIRE MANAGEMENT UNIT REACTION TEAM IN CASE OF FIRE

In case of a fire or any smoke detected the following actions must be taken:

- 1. Immediately inform the local Fire Brigade Service;
- 2. The FMU manager must be informed;
- FMU manager or designated person activates the FMU's fire reaction team to be on standby or to
  proceed to fire (if the reaction team does exist, are trained and have the necessary personal
  protective clothing);
- 4. FMU Manager proceeds to fire;
- 5. Reaction team proceeds to fire;
- 6. Manager arrives at fire and evaluates the situation;
- 7. If the fire can be managed / supressed by the FMU reaction team proceed to fight the fire;
- If the fire cannot be supressed, contain as best as possible and wait until the local Fire Brigade/ Services arrives;
- The local Fire Brigade will then take command and will task the FMU reaction team accordingly (if necessary);
- 10. FMU reaction team and equipment must be on standby and available to the Fire Chief or Fire Boss until further notice (in charge of the fire brigade on the scene or Incident Commander);
- 11. No back burn to be made by any member (only Fire Chief or Fire Boss allowed to initiate).

### Additional assistance: (Extended Attack)

- District Municipality Fire & Rescue Service
- Municipality Fire Brigade Service
- FPA in conjunction with Working on Fire (WoF) resources ...... Base

### 3. OVERHEAD COMMAND AND CONTROL

- If the fire can be contained by the FMU fire reaction team the FMU Manager or designated person will be in command of the fire fighting personnel (FMU Reaction Team) and equipment, and will make the decisions.
- 2. In case of a wildfire which cannot be contained by the FMU reaction team and where more resources are needed, coordination between the different services/organisations is of utmost importance. To achieve this, the following procedure should be implemented:
  - a. The roleplayers will identify a suitable site/office from where the JOC (Joint Operation Centre) could be operated. Key personnel of the different organisations will meet there and decide what the best course of action (Incident Action Plan) will be and where the fire fighting resources will be allocated.
  - b. It could happen in case of a large fire that either the municipal Fire Chief or a senior manager with extensive experience or FPA personnel takes command of a fire within the FMU's area of responsibility or neighbouring land in terms of section 6(1)(c) or 18(4)(a) of the National Veld and Forest Fire Act (Act No. 101 of 1998).

### **SECTION 2: BOUNDARIES OF THE FMU**

4.	BOUNDARIES OF THE FMU:
	North:

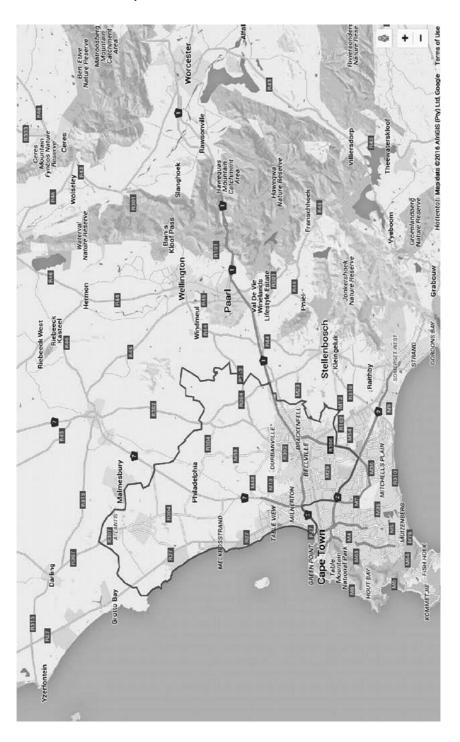
East: South: West:

\*\*See attached map

FMU (Name)						
Member Name	Property Name	Ref	Size	Phone Number	Cell Number	Email Address

Other Helicopter bucket filling point Suction point Gravitational water point 2 Way radios Nap sack pumps Fire Beaters Water Unit Bakkie Sakkies **Trained** firefighters **SECTION 4: Members' Available Resources** Ref **Property Name** Victoria Bay FMU Member Name Page 5

### **SECTION 5: FMU Map**



# 100L 22: WESTERN CAPE STANDARDISED INCIDENT COMMAND FORM

1. Incident Name	2. Operational Period	IAP COVER SHEET
	Date	
	Time	
	INCIDENT ACTIO	N PLAN
he items checked below ar	re included in the Incident Action Pla	an
☐ SITUATION REPO	RT	
☐ INCIDENT OBJEC	TIVES	
☐ ORGANISATIONA	L LIST	
☐ SECTOR ASSIGN	MENT	
☐ DIVISIONAL ASS	IGNMENT	
☐ AIR OPERATIONS	PLAN	
☐ COMMUNICATIO	N PLAN	
☐ SAFETY PLAN		
☐ MEDICAL PLAN		
☐ FIRE MAP		
☐ WEATHER FOREC	CAST AND MAP	
☐ FIRE BEHAVIOUR	FORECAST	
☐ FACILITIES		
3. Approved by Incident Commander: Name	Signed	Date/Time

1. Incident Name	2. Operational Period  Date: Time:	SITUATION REPORT
3. Location	4. Vegetation  Plantation/Mountain fynbos/ Coastal fynbos/ Grass/Slash/ Alien veld Other:	5. 1:50000 Map ref. GIS ref.
6. Assessment		
7. Action taken		
8. Factors		
9. Predicted Incident Deve	elopment	
10. Prepared by:		Date/Time:
		Page 2

FYNBOSFIRE \*\*

T93

1. Incident Name	2. Operational Period	INCIDENT OBJECTIVES
	Date: Time:	02,2011120
3. Overall Incident Objectives		
4. Objectives for specified Opera	ational Period	
, , ,		
5. Prepared by:		Date/Time:

1. Incident Name	2. Operation Date: Time:			ISATION
3. Command Staff		Phone	Cell Phone	Radio Channe
Incident Commander				
Deputy Incident Commander				
Information Officer				
Safety Officer				
Liaison Officer				
4. Agency Representative		Phone	Cell Phone	Radio Channe
Lead Agency				
Agency				
Agency				
Agency				
5. Planning Section		Phone	Cell Phone	Radio Channe
Planning Section Chief				
Situations Unit				
Resources Unit				
Management Support Unit				
Information Unit				
Advance Planning Unit				
Technical Specialists Unit				
6. Logistics Section		Phone	Cell Phone	Radio Channe
Logistics Section Chief				
Supply Unit				
Catering Unit				
Facilities Unit				
Finance Unit				
Communications Unit				
Medical Unit				

7. Operations Section	Phone	Cell Phone	Radio Channel
Operations Section Chief			
Deputy Operations Manager			
Division One Commander			
Sector A Supervisor			
Sector B Supervisor			
Sector C Supervisor			
Sector D Supervisor			
Division Two Commander			
Sector E Supervisor			
Sector F Supervisor			
Sector G Supervisor			
Sector H Supervisor			
Air Division Commander			
Air Attack Supervisor			
Air Support Supervisor			
8. Prepared by:	Date/Time	<b>e</b>	

1. Incident Name	2. Operational Period  Date:			SECTOR ASSIGNMENT	
3. Sector	Time: 4. Description			5. Division Assig	ned
6. Sector Supervisor		Aff	iliation	Phone	Radio Channel
7. Resources assigned this pe	riod				
Resource/Crew	Leader	# Persons	Transport Required	Drop-off Point / Time	Pickup Point / Time
8. Sector Assignment / Special	al Instruction	ns			
9. Sector Communications				Phone	Radio Channel
Division / Division Commander					
Aerial Attack Supervisor					
Safety Officer					
10. Prepared By:	l			Date / Time	I
					Page

FYNBOSFIRE ® T97

1. Incident Name	2. Operational			DIVISION ASSIGNMENT	
3. Sector	4. Description				
5. Division Commander		Affiliation	Phone	Radio Channel	
6. Resources assigned this p	eriod				
Sector	Supervisor	Cre	ws	Radio Channel	
7. Division Assignment / Spe	cial Instructions				
7. Division Assignment / Spe	cial Instructions				
7. Division Assignment / Spe	cial Instructions				
	cial Instructions		Phone	Radio Channel	
8. Division Communications	cial Instructions		Phone		
3. Division Communications  Operations Manager	cial Instructions		Phone		
7. Division Assignment / Spe  8. Division Communications  Operations Manager  Aerial Division Commander	cial Instructions		Phone		
8. Division Communications Operations Manager	cial Instructions		Phone		

1. Incident Name	2. Operat	ional Period		AIR OPE	RATIONS				
	Date: Time:			PLAN					
3. Personnel and Communications									
Position		Name	Affiliation	Phone	Radio Channel				
Air Divisional Commander									
Air Attack Supervisor									
Air Support Supervisor									
Lead Helicopter Pilot									
Lead Fixed-Wing Pilot									
4. Air Resource Assignme	ents								
Pilot Name / Company	Aircraft Type	Reg or Call Sign	Assignment	Tactical Freq/Ch	Telephone Numbers				
					Onboard:				
					Company				
					Onboard:				
					Company				
					Onboard:				
					Company				
					Onboard: Company				
					Onboard:				
					Company				
					Onboard:				
					Company				
					Onboard:				
					Company				
					Onboard:				
					Company				
5. Location of Filling Poin	ts / Service								
Name		Grid Refere	nce						
6. Safety Notes / Hazards	s / Radio Co	verage Limita	tions						
7. Air Operations Special	Equip or Ser	vice							
8. Prepared By:				Date / Time					
					Pag				

FYNBOSFIRE ® T99

1. Incident Name	2. Operational Period Date: Time:		COMMUNICATIONS PLAN		
3. Radio Channels					
Assigned To	Function	Channel	Frequency	System	
4. Telephone		I			
Assigned To	Landline	Cell phone	Fax	Comments	
5. Other (e.g. email, s	satphone, etc)		ı		
6. Prepared By:			Date / Time		

1. Incident Name	2. Operational Period	SAFETY PLAN
	Date:	
	Time:	

#### 3. General Safety Points

6. Prepared By:

Everyone is to be signed in and out of the fire ground through the Incident Control Point for both safety check and payment records.

Maintain regular situation reports (containing all relevant information) via line supervisors.

LACES	Fire Orders	Watch-outs
	Conditions and forecasts.	1. Fire size is unknown (no size up)
_ – Lookout(s)	2. Know what your fire is doing at all	2. Unfamiliar territory.
<b>A</b> – Awareness	times.  3. Base all actions on current and	3. Safety zones and escape routes not identified.
- Anchor Point(s)	expected behaviour of the fire.  4. Identify escape routes and safety	Unfamiliar with weather and local factors influencing fire behaviou
<ul><li>Communication(s)</li><li>Escape Route(s)</li></ul>	zones and make them known.	5. No communications link with
- Safety Zone(s)	5. <b>Post</b> lookouts when there is possible danger.	<ul><li>crew members or supervisor.</li><li>6. Instructions and assignments no</li></ul>
	6. <b>Stay</b> alert. Keep calm. Think clearly. Act decisively.	clear.
	7. Maintain prompt communication	7. Weather is getting hotter, drier and relative humidity dropping.
	with your crews, your supervisor and adjoining crews.	8. Wind increases and/or changes direction.
	8. Give clear instructions and ensure they are understood.	Getting frequent spot fires acros the line.
	9. Maintain control of your crews at all times.	10. Working on a steep slope.
	10. Fight fire aggressively, having	12. Working in rugged terrain.
	provided for safety first.	13. Can't see main fire.
		<ul><li>14. In unburnt vegetation.</li><li>15. Walking through hot ashes.</li></ul>
		16. Working alone.
		17. Getting tired.
		18. Working near machinery.
		20. Working with aircraft.
		21. Working around trees or spars.

Page 10

FYNBOSFIRE ®

Date / Time

1. Incident Name	2. Operational Period		MEDIC	MEDICAL PLAN		
	Date: Time:					
3. First Aid Station						
Name	Location	Phone/Rad	io Channel	Paramedic Station	s available at	
4. Transportation						
Ambulance Service	Address	Address Phone/Radio Channel		Paramedics available with ambulance		
5. Hospitals						
Hospital Name	Address	Phone	Travel Tim	<u> </u>		
•			Road	Air	Burn Unit	Heli Pad
6 Special Emerges	Droodures:					
6. Special Emergeno	y i locedules.					
7. Prepared By:				Date / Tir	ne	
6. Reviewed by Safe	ety Advisor:			Date / Tir	ne	
age 11						

# **INCIDENT ORGANISER VELDFIRE**

Situation R	eport						
Incident Nar	ne:					Shift:	
Location:							
Incident Nur	mber:					Date:	
Incident Typ	e:						
Grid Referen	ice:			Hours:			
Assessment	: Current situation (N	ote any c	ritical issu	es & assumptions	made)		
Action Taker	n: (Consider Progress)						
Factors: (We	eather and other facto	rs or limi	tation sho	uld be noted, incl	uding resour	ce status)	
	cident Development: (	Note how	this situa	tion is expected t	o evolve)		
Resource S	Summary						
Resources Ordered (hrs)	Resources Type & Name Call Sign	ETA (hrs)	Arrival (hrs)	Location / Assi	gnment / Co	mment	Time Released (hrs)
Completed b	y:			Date:			
Position:				Time:			
lints for suc	ccessful Incident Mana	gement:		Situation Report			
Keep record	ls				Prepared &	Communicated:	Time:
<ul> <li>Plan ahead</li> <li>Set up a Cor</li> </ul>	mmand and Control structure			On Arrival			
Delegate fur	nctions			+ 1 hr			
<ul> <li>Develop and</li> <li>Brief person</li> </ul>	d update Incident Action Plans			+ 2 hrs			
<ul> <li>Sectorise th</li> </ul>	e incident			+ 3 hrs			
<ul> <li>Give regular</li> <li>Plan change</li> </ul>	Situation Reports			+ 4 hrs			
	ve communications			+ 5 hrs			
Safety First.	Every Job, Every time	(I.A.C.F.	S )				

## **INCIDENT ORGANISER VELDFIRE**

#### **Incident Action Plan** Incident Objective / Aim: (Analyse and consider all options before setting plan to achieve desired outcome) Strategy / Strategies: (Plan of Action to meet Incident Objective / Aim) Tactics: (Specific actions to achieve incident strategy/s) Tasks: (Allocation of work. Who must do what and by when) Period: Date: Prepared by: Position: **Incident Map** В С D Ε F G Н ı Κ L М Ν 0 Ρ α R 1 2 4 5 6 7 8 9 Map Legend: 10 Incident Control Point ICP 11 Assembly Area AΑ 12 Staging Area SA 13 Safe Forward Point **SFP** 14 Helibase HB 15 HP Helipad 16 Other 17 North

# **INCIDENT ORGANISER VELDFIRE Incident Management Structure** Prepared by: **Incident Controller** Information Position: Date/Time: Name Safety Build/Draw your structure **RCS** Liaison and fill in positions Names & radio call signs [RCS] Operations Planning/Intelligence Logistics Name Name Name RCS **RCS RCS** Situation Resources **Supplies** Management support **Facilities** Intelligence/Information Communications Advanced planning Medical Catering **Finance**

Sector	Resource	Task	Grid	Tasked at hrs

# **INCIDENT ORGANISER VELDFIRE** Log of Actions Date: Initials Time: Completed by: (All log entries are to be completed in pen. Record time of each entry. Do not leave blank lines between entries. Sign off entries) Page \_\_\_\_ of\_\_ **Comunication Plan:** Command: Tactical: Support: Ground to Air: Air to Air: Page 15



# 100L 23: MOU FOR AERIAL REQUEST FOR ASSISTANCE

### FIDE STIDDDESSION - AIDCDAFT & HAND CDEW

Acting/Capacity:	ID No: VAT No:		
Person/s Responsible for payment: Acting/Capacity: Contact number: Email Address & Fax No: Fotal Resources required:	VAT No:		
Contact number:	VAT No:		
Email Address & Fax No:			
otal Resources required:			
	Landownic	×1	
*Dombor	*1	laliaantar	
*Spotter:*Bomber:		· · · · · · · · · · · · · · · · · · ·	
*HSV:*WoF Ground Team:			
Fire suppression required on: (date)(time)			
PA Member: YES   NO FPA Number:	WoF CALL TAK	E NO CT:	
Operations on the abovemention	ned property o	r area.	
all claims, demands, fines, penalties, actions, proceedi expenses or other liabilities caused whether negligent non-compliance by the organisation of his/her duties a	ly or otherwise	by the non-observance or	
	Ü	•	
I/we confirm that <u>all</u> suppression operations shall be perfo lessee / nominated representative.	rmed in the pres	ence of the IC / landowner /	
I/we confirm that <u>all</u> suppression operations shall be perfolessee / nominated representative.  It will be the responsibility of the IC / landowner / lessee / on Fire members are not exposed to unsafe working condit prohibited as per the Veld & Forest Act 101 Of 1998.	rmed in the pres	ence of the IC / landowner /	
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## 100L 24: FPA AUDIT FORM & PROGRESS CHECKLIST

FPA PERFORMANCE ASSESSMENT
Name of FPA:
Province:
Date:

Mark with  $(\checkmark)$  or (X)

Activity	Acceptable	Not acceptable	Corrective steps/ comments
. Operational plan			
1.2 Fire Suppression Plan			
1.3 Recovery and Rehabilitation Plan			
1.4 Training of Members			
1.5 Veldfire Records/ Reports			
2. Levies Paid-Up			
3. Members' Register			
1. FDR Communicated			
5. AGM held			
6. Report Submitted to Minister			
7. New Members Recruited			

8. FPO capable		
9. Executive Committee Intact		
10. Collaboration with SAPS		
Veldfire Offences Recorded     and Reported		
12. Collaboration with Neighbours		
13. Support from Umbrella		
14. Support from DAFF Regional Staff Member		
GENERAL COMMENT/S		

Division	Category	Description	Reference		
Legal Compliance	Legislative	AGM minutes	FPA		
Legal Compliance	Legislative	Appointed FPO as per NIFFA Act 101 of 1998			
Legal Compliance	Legislative	DAFF Registration Number	FPA		
Legal Compliance	Legislative	Excom structured	FPA		
Legal Compliance	Legislative	FPA established as per NIFFA Act 101 of 1998	Forms 1 & 2		
Legal Compliance	Legislative	FPA member rules	SOP		
Legal Compliance	Legislative	FPA minimum resource requirements	FPA		
Legal Compliance	Legislative	FPO appointment certificate from DAFF	DAFF		
Legal Compliance	Legislative	FPO registered with DAFF	Form 5		
Legal Compliance	Legislative	Notice to DAFF of FPA boundary changes			
Legal Compliance	Legislative	Supply annual statistics to DAFF	FPA		
IFM	Awareness	FPA Awareness programme	FPA		
IFM	Awareness	FPA website	FPA		
IFM	Awareness	Inform members of equipment & technology	FPA		
IFM	Awareness	Membership minimum guidelines			
IFM	Awareness	Provide fire awareness support for communities	FPA		
IFM	Awareness	Signboards erected on national & provincial roads	FPA		
IFM	Awareness	WoF community awareness programme	WoF		
IFM	Data /Statistics	FPA resource database	FPA		
IFM	Detection	Detection operators to activate all units per zone	Reponses plai		
IFM	Detection	Implement electronic detection system	Infrastructure		
IFM	Dispatch and Coordination	Access to reliable weather forecasting service in place	FPA		
IFM	Dispatch and Coordination	Communicate daily FDR	FPA		
IFM	Dispatch and Coordination	Dispatch centre	Infrastructure		
IFM	Enforcement	Enforcement database - trends, strategies	FPO		
IFM	Enforcement	FPA Manager active in issuing warnings, fines and getting convictions	FPO		
IFM	Enforcement	FPA Manager delegation of responsibilities	FPA		
IFM	Enforcement	FPA Manager enforcement delegation	FPA		
IFM	Enforcement	FPA Manager peace officer training	FPA		
IFM	Enforcement	FPA member rules enforced	FPO		
IFM	Enforcement	FPA minimum resource requirements enforced	FPO		
IFM	Enforcement	FPA prohibition period	FPA / LM		
IFM	Enforcement	FPO active in issuing warnings, fines and getting convictions	FPO		
IFM	Enforcement	FPO card	DAFF		
IFM	Enforcement	FPO is independent and funded by FPA	Act 101		
IFM	Enforcement	FPO registered as Volunteer Fire Brigade member	FBS Act		
IFM	Enforcement	Municipal bylaws with reference to prohibition period	FPA / LM		
IFM	Planning	Adopt ICS as a standard system	FPA		
IFM	Planning	Allocate resources into wards	SOP		
IFM	Planning	Bulk supply units	Organise		
IFM	Planning	Coordination of actions with adjoining FPAs	FPA		
IFM	Planning	Fuel load assessment for whole area	MAP		
IFM	Planning	Implement management plan for high risk areas	Action plan		
IFM	Planning	List and map all water resources in the area List a			

Division	Category	Description	Reference
IFM	Planning	Manual labour pool	Organise
IFM	Planning	Post season review of operations	FPA
IFM	Planning	Pre season strategic / tactical planning	FPA
IFM	Planning	Risk register / map - know where the risk is	Action plan
IFM	Planning	Strategic placement of resources based on risks	SOP
IFM	Planning	Veldfire Management Plan	Plan
IFM	Suppression	Activate aerial resources according to response plan per FDI	Reponses pla
IFM	Suppression	Activate ground resources according to response plan per FDI	Reponses pla
IFM	Suppression	Dedicated fire channels	Comms plan
IFM	Suppression	Dedicated FPA frequencies	Comms plan
IFM	Suppression	FPA firebreak teams / WoF	Reponses plai
IFM	Suppression	FPA funded fire fighting aircraft	Response
IFM	Suppression	FPA funded tool trailers	Organise
IFM	Suppression	FPA operational fire suppression teams / WoF	Reponses pla
IFM	Suppression	FPO operational input	FPO
IFM	Suppression	Implement ICS simulation	Simulation
IFM	Suppression	Incident Command Post in place	Infrastructure
IFM	Suppression	Prescribed burning	
IFM	Suppression	Provide fire suppression support for communities	FPA
IFM	Suppression	Strategic placement on High FDI periods	SOP
IFM	Suppression	Support District Municipality funded fire fighting aircraft	Response
IFM	Suppression	Support provincial funded fire fighting aircraft	Response
General Management	Administration	BBBEE Compliant	FPA
General Management	Administration	BBBEE level	FPA
General Management	Administration	Communication Systems	
General Management	Administration	Directors registered if NPC	FPA
General Management	Administration	NPC registered	FPA
General Management	Administration	Standard Operating Procedures	FPA
General Management	Administration	UFPA membership and active participation	FPA
General Management	Administration	VAT registered	FPA
General Management	Audits	DAFF audit	DAFF
General Management	Audits	DAFF audit action plan	DAFF
General Management	Audits	Financial audit	DAFF
General Management	Budget	FPA budget	FPA
General Management	Budget	FPA budget vs. actual	FPA
General Management	Budget	Membership Structure	FPA
General Management	Data /Statistics	Area (ha) of FPA covered by paid-up members	FPA
General Management	Data /Statistics	Fire statistics - trends and analysis	FPA
General Management	Data /Statistics	Fire statistics database	FPA

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Division	Category	Description	Reference
General Management	Data /Statistics	FPA membership database / register	FPA
General Management	Data /Statistics	Supply monthly fire statistics to UFPA and DAFF	FPA
General Management	Human Resources	Code Of Conduct	
General Management	Human Resources	Grievence procedures	
General Management	Human Resources	Incentive Systems	
General Management	Human Resources	Personel Contracts	
General Management	Human Resources	Standard Operating Procedures	
General Management	Legislative	Burning permit system in place	FPA
General Management	Legislative	FPA manager registered as Volunteer FB member	FBS Act
General Management	Legislative	FPO is Chief Fire Officer	Act 101
General Management	Meetings	AGM held	FPA
General Management	Meetings	Attend Other Stakeholder meetings	FPA
General Management	Meetings	Bussiness Unit / Ward Meetings held	
General Management	Meetings	Executive Meetings	
General Management	Meetings	Facilitation of Fire de brief Meeting	
General Management	Meetings	General Management Meetings	
General Management	Meetings	Good member representation at meetings	FPA
General Management	Personnel	FPA Manager	FPA
General Management	Personnel	PAYE registered	FPA
General Management	Personnel	UIF registered	FPA
General Management	Personnel	Workmen's Compensation registered	FPA
General Management	Planning	Annual operational budget	FPA
General Management	Planning	Business plan available	FPA
General Management	Planning	Business plan current (<5 years old?)	FPA
General Management	Planning	Business plan operational	FPA
General Management	Planning	Business plan realistic	FPA
General Management	Planning	FPO functional input	FPO
General Management	Planning	Membership drive startegy implimented	
General Management	Planning	Membership drive strategy	
General Management	Stakeholder Engagement	Engagement with District Municipalities	
General Management	Stakeholder Engagement	Engagement with Local Municipalities	
General Management	Stakeholder Engagement	Engagement with Parastatals	

Division	Category	Description	Reference	
General Management	Stakeholder Engagement	Engagement with provincial structures		
General Management	Stakeholder Engagement	Involvement in the IDP process		
General Management	Training	Training plan - management	DAFF / FPA	
General Management	Training	Training plan - members	DAFF / FPA	
General Management	Training	Training plan - partners	DAFF / FPA	
FPA DATA	Data /Statistics	Admin FPA Chairman		
FPA DATA	Data /Statistics	Admin FPA Manager		
FPA DATA	Data /Statistics	Admin FPA FPO		
FPA DATA	Data /Statistics	Admin FPA Secretary		
FPA DATA	Data /Statistics	Admin FPA Chairman Contact No		
FPA DATA	Data /Statistics	Admin FPA Chairman Email		
FPA DATA	Data /Statistics	Admin FPA Chairman Name		
FPA DATA	Data /Statistics	Admin FPA Manager Contact No		
FPA DATA	Data /Statistics	Admin FPA Manager Email		
FPA DATA	Data /Statistics	Admin FPA Manager Name		
FPA DATA	Data /Statistics	Admin FPA FPO Contact No		
FPA DATA	Data /Statistics	Admin FPA FPO Email		
FPA DATA	Data /Statistics	Admin FPA FPO Name		
FPA DATA	Data /Statistics	Admin FPA Secretary Contact No		
FPA DATA	Data /Statistics	Admin FPA Secretary Email		
FPA DATA	Data /Statistics	Admin FPA Secretary Name		
FPA DATA	Data /Statistics	Local Municipalities the FPA covers		
FPA DATA	Data /Statistics	Number of DM in FPA boundaries		
FPA DATA	Data /Statistics	Number of FPA members - paid	FPA	
FPA DATA	Data /Statistics	Number of FPA members - unpaid	FPA	
FPA DATA	Data /Statistics	Number of LM in FPA boundaries		
FPA DATA	Dispatch and Coordination	FPA Wards / Business Units	FPA	
FPA DATA	Dispatch and Coordination	Transport Bakkies Trooping / Equipment		
FPA DATA	Dispatch and Coordination	Transport Trucks Trooping / Equipment		
FPA DATA	Dispatch and Coordination	Transport Vehicled with Transport Allowance Staff		
FPA DATA	Personnel	Number of FPA employees	FPA	
FPA DATA	Personnel	Wof Teams		
FPA DATA	Personnel	Wof Helitac teams		

Division	Category
FPA DATA	Administration
General Management	Audits
IFM	Awareness
Legal Compliance	Budget
	Data /Statistics
	Detection
	Dispatch and Coordination
	Enforcement
	Human Resources
	Legislative
	Meetings
	Personnel
	Planning
	Stakeholder Engagement
	Suppression
	Training



## 100L 25: FPA MEMBER ASSESSMENT FORM

FPA Registration No  MEMBER / LANDOWNER COMPLIANCE CHECK							
DETAILS							
Date: Farm User Name: Farm Name: Farm Number: Total hectares:							
Telephone Numbers: Home: . Email Address: Radio Call Sign:			Cell:				
	ı	UTILISA	TION OF LAND				
Agriculture  Hospitality  Lifestyle  Estate Development  Agricultural Commodity Group: Beef  Poultry  Pork  Dairy  Timber  No. of employees:  Employees on farm:  Does the member reside on the property? YES   NO Farm Manager/Other Management  FIRE PREVENTION							
Compliance Check	Yes	No	Comment				
Firebreak Agreement with all neighbours Boundary firebreaks established Bare earth firebreaks Burnt firebreaks							
Boundary firebreak width							
Boundary firebreaks both sides of the joint boundary							
Permit numbers issued to date							
Internal firebreaks established							
Buildings & Structures – prevention methods used							
Access roads - Accessible							

FIRE READ	INESS: F	IRE FIGHT	ING EQUIPMEN	NT	
Truck Tankers	No			Litres	
Tractor Drawn Tankers	No			Litres	
Tractor Mounted Tanks	No			Litres	
No. of Bakkie Sakkies	No			Litres	
No. of Knapsacks	No			Litres	
Additional:					
Quick Fill Pump	No				
Overhead Quick Fill Point	Yes	s	No		
Dams / Rivers - Suitable for Suction	Yes		No 🗍		
Dams - Helicopter Suitable (minimum depth 2m)	Yes	<u> </u>	No		
No. of available labourers on farm					
Radio	Yes	s	No		
Radio Channels					
FIRE Compliance Check	READINI Yes	ESS: PPE 8	TRAINING	Comment	
Staff Basic Fire Fighting Training					
- Certificates  100% / Fire Retardent Work Wear					
100% / The Relaident Work Wear					
Leather gloves & hoots					
Leather gloves & boots					
Protective headwear & goggles					
Protective headwear & goggles First Aid kits	COMPLIA	ANCE SUM	ΙΜΔΡΥ		
Protective headwear & goggles First Aid kits	COMPLIA	ANCE SUM		ment	
Protective headwear & goggles  First Aid kits  Compliance Check	COMPLIA	ANCE SUM	IMARY Comr	ment	
Protective headwear & goggles  First Aid kits  Compliance Check  Prevention	COMPLIA	ANCE SUM		ment	
Protective headwear & goggles  First Aid kits  Compliance Check  Prevention  Readiness	COMPLIA	ANCE SUM		ment	
Protective headwear & goggles  First Aid kits  Compliance Check  Prevention	COMPLIA	ANCE SUM		ment	
Protective headwear & goggles  First Aid kits  Compliance Check  Prevention  Readiness	COMPLIA	ANCE SUM		ment	
Protective headwear & goggles  First Aid kits  Compliance Check  Prevention  Readiness	COMPLIA				

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## **100L 26: NON-COMPLIANCE NOTICE**

l,		[NAME]
Ass	ociati	pacity as the Registered Fire Protection Officer (Reg. 838/02) of the Fire Protection on registration, established and registered by the Department of Agriculture Forestry and Fisheries of the National Veld and Forest Fire Act 101 of 1 998, hereby make the following statement under oath.
as app [DA I vis note	eared TE], h sited t	[DATE] at approximately [TIME] a fire was reported by the owner of the farm commonly known
		rence to the National Veld and Forest Fire Act 101 of 1998, the following clauses, but not limited to any tinent clause of the said Act, are noted:
Pui	pose	e:
1.	(1)	The purpose of this Act is to prevent and combat veld, forest and mountain fires throughout the Republic.
	(2)	The Act provides for a variety of institutions, methods and practices for achieving the purpose.
Inte	erpre	etation:
2.	(1)	(xiii) "owner" has its common law meaning and includes—
		(a) a lessee or other person who controls the land in question in terms of a contract, testamentary document, law or order of a High Court.
	(2)	Words derived from the words defined have corresponding meanings, unless the context indicates otherwise.
	(3)	A reasonable interpretation of a provision which is consistent with the purpose of this Act must be preferred over an alternative interpretation which is not.
	(4)	Neither—
		(a) a reference to a duty to consult specific persons or authorities, nor
		(b) the absence of any reference to a duty to consult or give a hearing,
		in this Act exempts the official or authority exercising a power or performing a duty from the duty to proceed fairly in respect of all persons entitled to be heard.
	(5)	Where there is more than one owner in respect of the same land, the proper performance by one owner of a duty imposed in terms of this Act exempts the other owners from performing that duty.
		In terms of the National Veld and Forest Fire Act 101 of 1998, I hereby formally lay the following charges against the "owner" of the farm commonly known as
25.	(1)	Lighting, using or maintaining a fire in the open air in contravention of section 10(2).
	(2)	(b) lighting, using or maintaining a fire, whether with or without permission of the owner, which spread and caused injury and/or damage;
	(2)	(c) threw, put down and / or dropped a burning match and / or other burning material and / or any material that was capable of spontaneous combustion or self-ignition and, in doing so, made a fire which

[NAME OF FPA] Fire Protection Association Registered in terms of the National Veld & Forest Fire Act 101 of 1998 Dept. of Agriculture, Forestry & Fisheries Reg. No. 838/01

spread and caused injury and / or damage;

- (3) (a) failed to prepare a firebreak when obliged to do so in terms of section 12(1), that is, every owner on whose land a veldfire may start or burn or from whose land it may spread must prepare and maintain a firebreak on his or her side of the boundary between his or her land and any adjoining land;
- (4) (a) failed to meet the standards of readiness for fire fighting referred to in section 17(1) (b), that is every owner on whose land a veldfire may start or burn or from whose land it may spread must
  - (a) have such equipment, protective clothing and trained personnel for extinguishing fires as are -
    - (i) prescribed; or
    - (ii) in the absence of prescribed requirements, reasonably required in the circumstances;
  - (b) and ensure that in his or her absence responsible persons are present on or near his or her land who, in the event of fire, failed to—
    - (i) extinguish the fire or assist in doing so; and
    - (ii) take all reasonable steps to alert the owners of adjoining land and the relevant fire protection association, if any, and failed to notify the persons referred to in section 18(1)(a), that is any owner who has reason to believe that a fire on his or her land or the land of an adjoining owner may endanger life, property or the environment, must immediately —
      - (a) take all reasonable steps to notify -
        - the fire protection officer or, failing him or her, any member of the executive committee of the fire protection association, if one exists for the area; and
        - (ii) the owners of adjoining land; and
      - (b) do everything in his or her power to stop the spread of the fire.
- (5) As owner, occupier or person in control of land on which the fire occurred failed to take reasonable steps to extinguish the fire and/or to confine it to that land and/or to prevent it from causing damage to property on adjoining land.

There was consequential loss and damage incurred on neighbouring farms as a direct result of such negligence in terms of the Act, whether any such landowner decides to proceed with any civil action is for their decision, however reference in this regard is made to section 34 of the National Veld & Forest Fire Act 101, 1998.

#### Presumption of negligence

- 34. (1) If a person who brings civil proceedings proves that he or she suffered loss from a veldfire which-
  - (a) the defendant caused; or
  - (b) started on or spread from land owned by the defendant,

the defendant is presumed to have been negligent in relation to the veldfire until the contrary is proved, unless the defendant is a member of a fire protection association in the area where the fire occurred.

(2) The presumption in subsection (1) does not exempt the plaintiff from the onus of proving that any act or omission by the defendant was wrongful.

Signed:	[NAME]
Fire Protection Officer	
	[Fire Protection Association]
DAEE.	[DATE]

[NAME OF FPA] Fire Protection Association Registered in terms of the National Veld & Forest Fire Act 101 of 1998 Dept. of Agriculture, Forestry & Fisheries Reg. No. 838/01



## TOOL 27: DETERMINATION FOR THE ADMISSION OF GUILT FINES

## NATIONAL VELD AND FOREST FIRE ACT NO. 101 OF 1998

SEC.	DESCRIPTION OF OFFENCE	CAT. OF OFFENCE	PENALTY ON FIRST CONVICTION	AMOUNT
25(5)	* An owner, occupier or person in control of land on which a fire occur fails to take reasonable steps to • extinguish the fire • confine it to that land • prevent it from causing damage to property on adjoining land	1	Fine Imprisonment up to 2 years Both	R2 500.00 For serious damages NO A.G.
25(2)(a)	* A person leaves a fire which she/he lit, used or maintained in the open air unattended, before the fire is extinguished.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(2)(b)	* A person lights, uses or maintains a fire in the open air, with or without the permission of the owner, which spreads and causes injury or damage.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(2)(c)	* A person throws, puts down or drops a burning match or other burning material or material which is capable of spontaneous combustion or self ignition, and by doing so, makes a fire which spreads and causes injury or damage.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(2)(d)(i)	* A person lights, uses or maintains fire in a road reserve other than in a fireplace which has been designated by a competent authority.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(2)(d)(ii)	* A person lights, uses or maintains a fire in a road for a purpose other than to burn a firebreak.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(2)(e)	* A person smokes where, by notice, smoking is prohibited.	2	Fine Imprisonment up to 1 year Both	R1 500.00
25(3)(a) r.w. Section 12 (1)	* An owner on whose land a veldfire may start or burn or spread fails to prepare and maintain a firebreak on his or her side of the boundary with adjoining land.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(3)(a) r.w. Section 14	* An owner whose land coincides with the boundary of the Republic and whose land is subject to a risk of veldfire fails to prepare and maintain a firebreak as close as possible to the border.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(3)(b) r.w. Section 12(2)(b)	* An owner who cannot reach agreement with his or her neighbour for a date on which both can burn their firebreaks, fails to give the owner of adjoining land, and the FPA if there is one, 14 days written notice of the day on which he or she intends to burn the firebreaks.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(3)(c) r.w. Section 12(4)(a)	* An owner burns a firebreak when the FPA has objected.	2	Fine Imprisonment up to 1 year Both	R2 500.00

SEC.	DESCRIPTION OF OFFENCE	CAT. OF OFFENCE	PENALTY ON FIRST CONVICTION	AMOUNT
25(3)(d) r.w. Section 12(5)	* An owner fails to inform the owners of adjoining land and the FPA if there is one:  • that burning a firebreak cannot be done on the  • agreed days or if no agreement was reached, on the days he or she has not given notice for,  • of the additional days on which he or she now intends to burn.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(4)(a) r.w. Section 17(1)	<ul> <li>* An owner on whose land a veldfire may start or burn or spread fails to meet the standards of readiness for fire fighting:</li> <li>by not having the equipment, protective clothing and trained personnel for extinguishing fires, either that are prescribed, or reasonably required in the circumstances;</li> <li>by not ensuring that in their absence, a responsible person will be present on or near their land who if there is a fire will extinguish it or assist in doing so; alert the owners of adjoining land and the FPA if there is one.</li> </ul>	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(4)(b) r.w. Section 18(1) (a)	* A person who has reason to believe that a fire on his or her land, or the land of an adjoining owner may endanger life, property of the environment, fails to notify  • the Fire Protection Officer, or failing him or her, any member of the executive committee of the FPA if one exists for the area, and  • the owners of adjoining land.	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(4)(c) r.w. Section 18 (3)(a)	* A person refuses to assist a Fire Protection Officer who is taking over control of the fighting of a fire from any person who has been doing so up until his or her arrival.	2	Fine Imprisonment up to 1 year Both	R1 500.00
25(4(c) F.W. Section 18(3) (b) or 18(4) (b)	* A person refuses to assist a Fire Protection Officer when ordered to do so on the basis that he or she is apparently not younger than 16 years and not older than 60.	2	Fine Imprisonment up to 1 year Both	R1 500.00
25(4)(d) r.w. Section 18(2); (3) and (4)	<ul> <li>* A person hinders or obstructs:</li> <li>any person fighting a fire that may endanger life, property or the environment on any land;</li> <li>a Fire Protection Officer who takes over control of fighting a fire;</li> <li>a Forest Officer who has taken over the control of fighting a fire in the absence of a Fire Protection Officer.</li> </ul>	2	Fine Imprisonment up to 1 year Both	R2 500.00
25(6)(a)(b)	* A person interferes with or prevents a Fire Protection Officer, a Forest Officer, a Police Officer or an officer appoint- ed under Fire Brigade Services Act from:  • entering and searching land or premises where she/he believes an offence is being or has been committed;  • seizing any vehicle, tool, weapon, animal or other thing which she/he believes is being or was used in the com- mission of an offence;  • arresting any person who she/he believes has committed a first or second category offence, or a third category offence if she/he believes that the person will fail to appear in answer to a summons.	3	Fine Community service up to 6 months Both	R1 000.00















