

Department  
Water Affairs and Forestry

This bulletin is published by the Department of Water Affairs and Forestry

This is a special edition of the *Veldfire Bulletin* on Fire Protection Associations to provide information for anyone who assists with the establishment of an FPA

## FORM AN FPA AND HELP TO PREVENT VELDFIRES

Regulations allowing Fire Protection Associations (FPA) to be registered and empowered by Department of Water Affairs and Forestry (DWAF) were published on 16 May 2003, and brought into effect on 1 August 2003. This is a special edition of the *Veldfire Bulletin*, to help you form and register an FPA. It contains detailed, technical advice and guidelines so that FPAs are formed and registered quickly – especially in fire-prone parts of South Africa.

FPAs are voluntary associations that may be formed by land owners to prevent, predict, manage and extinguish veldfires under the National Veld and Forest Fire Act of 1998. DWAF is ready to start registering FPAs with a specially designed, web-enabled FPA Registration Management System. Applicants who complete the relevant forms, available from any office of DWAF, should wait no longer than 30 days for their registration. Specially trained Fire Advisors are available throughout the country to assist with the formation of FPAs. Contact details for all DWAF's offices are on page 36.



Members of FPAs can help prevent veldfires  
(Picture courtesy of Ukuvuka Project)

What you can find in this special FPA *Veldfire Bulletin*

Steps in the process of forming an FPA – page 2  
Find out what has to be done to establish and register an FPA, and who can help you do it.

A summary of the regulations on FPAs – page 3  
Your easy guide to what's in the regulations.

Holding your FPA founding meeting – page 4  
The first formal step in establishing your FPA is to hold a founding meeting at which all landowners vote. Who can vote, how are votes allocated, what should be on the agenda of a founding meeting? These questions and more are answered.

Deciding on the boundaries of your FPA – page 6  
What boundaries make sense for your FPA? Some tips on deciding this.

Filling in Forms 1 and 2 – pages 10 - 14  
Completing and submitting Forms 1 and 2 leads to a fully functioning and empowered FPA, as well as a registered Fire Protection Officer. This step-by-step guide takes you through both forms and lets you know what's expected of your FPA.

When will the Minister register an FPA? – page 15  
Learn about the criteria that could be used when the Minister decides whether to register your FPA.

Your FPA's constitution – page 16  
What needs to be in an FPA constitution? This guideline takes you through it like a lawyer would.

Fulfilling the duties of an FPA – page 18  
Your FPA's business plan should address all of its duties set out in the Act. By working through an example with you, this section helps you understand how to develop a business plan which is built logically around veldfire risk analysis and management, as required by DWAF.

Your FPA's business plan is essential because it provides a framework for a consistent, diligent and efficient approach to veldfire management. Use this detailed, easy to understand guide and make sure you submit a business plan that DWAF can approve with confidence!

How can I get more help? – page 36  
Find contact details for all DWAF's offices on page 36.

# FORM 1: 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 the 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 is aware of the formation of the FPA.

## Elements of Form 1

### 1. Particulars of the FPA

**1.1 Name:** The name must include the words "Fire Protection Association". The name must be unique for any given District or Metropole. DWAF will check against the record of applications and registrations to ensure this and will issue lists at regular intervals to guide applicants.

**1.2 District Municipality(ies) or Metropole(s) within which the FPA would fall:** 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.

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.

**1.3 Subdivision of the District or Metropole, such as a Local Municipality or District Management Area, within which the FPA 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.

**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.

**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 FPA?** Because some organisations may already exist for the same purposes as intended for FPAs, or may easily accommodate the purposes, and 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.

**1.6 If yes, give the name of the existing organisation, the date of formation and 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.

### 2. Particulars of the person initiating the registration of the FPA

The names and contact details of the person initiating the registration must be recorded.

### 3. Declaration that no owner has been deliberately excluded from meetings or discussions about the formation of the FPA

A signed declaration must be included that states:

- (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 take *reasonable* steps to include owners, 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.

#### 4. Particulars of the area of jurisdiction of the FPA

4.1 If the area coincides with that of a municipality, name the municipality: The name of the municipality should agree 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 or subdivisions of municipalities. See page 6 for more information on FPA boundaries.

The validity of the reasons given will be judged by DWAF and will be assessed by discussion with the applicant, but should carry the support of the Chief Fire Officer where there is a municipal fire service. 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.

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 by the Department showing the boundaries of the FPA. Indicate wherever there is a common boundary with a neighbouring FPA 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. DWAF Fire Advisors can provide maps. Their contact details are on page 36.

The map does not have to show the boundaries of non-FPA members whose properties fall within the FPA area. 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 Estimate the extent of the area within the boundaries of the FPA and estimate the proportion of the area represented by owners who would be members of the FPA: Here DWAF's Fire Adviser for the area would need to be satisfied that these are reasonable estimates.

5. **Signed declaration that no other FPA is intended or exists within the area of the proposed FPA:** The person signing should be the initiator of the FPA.
6. **Declaration by the person initiating the registration of the FPA that the information in Form 1 is true and correct:** The person signing this should be the same as in 2.
7. **Recommendation by an appropriate representative of Local Government that the FPA go on to complete Form 2:** The person signing the declaration may be (a) the Mayor (b) a member of the municipal Executive (c) the head of the local Disaster Management Centre (d) the Chief Fire Officer, but should not be the same person who is initiating the FPA.
8. **Recommendation by the regional representative of DWAF that the FPA may go on to complete Form 2:** The DWAF Fire Advisor for the area should be satisfied that the desire to register the FPA is well-founded. By signing, the Fire Advisor is also indicating that he or she has shown due diligence in the administration of the form.
9. **Declaration by the Cluster Manager of DWAF that the FPA may go on to complete Form 2.**

# FORM 2: APPLICATION FOR THE REGISTRATION OF AN FIRE PROTECTION ASSOCIATION PART 2 AND APPLICATION FOR THE REGISTRATION OF THE FIRE PROTECTION OFFICER

The second part of the registration process is the completion and submission of Form 2, "Application for the registration of a fire protection association Part 2 and application for the registration of the fire protection officer", along with the documents required:

- the minutes of the founding meeting;
- the FPA's constitution;
- the FPA's business plan, which includes its veldfire management strategy and rules; and
- the minutes of the meetings which approved the constitution, appointment of the FPO, the business plan and Form 2.

Form 2 is designed to enable:

- the Minister to decide whether to register the FPA, thereby conferring on it its powers and duties under the Act; and
- the Director-General to decide whether to register the FPO, thereby conferring on him/her his or her powers and duties under the Act.

The Minister must be satisfied that the FPA is capable of performing its duties under the Act and is representative of owners in its area. The Director-General must be satisfied that the FPO is able to enforce the Act in a responsible manner. Form 2 is designed to enable both of them to establish what they need to establish.

## Elements of Form 2

1. **Particulars of the FPA:** the information for this item should be the same as in Form 1.
2. **Particulars of the representative of the FPA:** this person should not be the proposed fire protection officer.
3. **Address of the office of the FPA,** if established.
4. **Particulars of the founding meeting.**

4.1 Attach copies of advertisements of the founding meeting published in newspapers, if any: news-papers used to advertise should be the ones that reach most owners in the area and if no newspaper advertisements are attached, then 4.2 must be completed.

4.2 Describe other means by which owners were notified of the founding meeting, if any: these may be one or more of: (a) newsletters of associations to which owners belong and which collectively include most owners (b) letters, faxes or e-mail messages to owners (c) copies of notices posted in public places, and a list of the places in which these were posted and (d) detailed invoices for local or regional radio broadcasts. The initiator must have taken reasonable steps to reach owners, but need not prove that all owners have been reached.

4.3 Attach the minutes of the founding meeting, including the attendance register: The minutes must be attached to Form 2 in hard copy and signed by the Chairperson.

The Chief Fire Officer(s) or their delegates must have attended the meeting. If a delegate has attended, a copy of the written authorisation to the delegate signed by the CFO must be attached.

The attendance register must record:

- the names, contact details and property names of all owners who attended the meeting;
- the names, contact details and property names of all owners who were represented at the meeting and the names and contact details of the owners or organisations who represented them.

The minutes must indicate:

- whether or not there was unanimous support among owners or their representatives for the formation of the FPA;
- the number of votes cast in favour of the said formation;
- the number of votes cast against the said formation; and

- the number of owners or their representatives who abstained from casting their votes on the said formation.

The DWAF Fire Adviser must be satisfied that the minutes of the meeting are an accurate reflection of what took place there.

**4.4 Attach a list of names and contact details of members of the elected Executive Committee:** The regulations require that where the founding meeting votes in favour of forming an FPA it must at least:

- give the FPA a name;
- describe the area in respect of which the FPA is formed;
- elect the Executive Committee.

At least the details of (a) the Chairperson (b) the Secretary and (c) the Fire Protection Officer designate should be attached to Form 2.

**5. Signed declaration that no owner has been deliberately excluded from the formation of the FPA:** Here, the DWAF

Fire Adviser should be satisfied that the declaration is true and the signature is that of the Chairperson of the FPA, the FPO or a similarly responsible person.

**6. Attach a copy of the constitution of the FPA:** The constitution must accompany the application. If the FPA is applying in terms of section 4(3) (which allows the Minister to register existing organisations), then its founding law or constitution must comply with section 4(6): it must allow all owners in the area of the FPA to join provided they undertake to abide by its constitution and rules.

The copy of the constitution of the FPA may be attached as a hard copy or accompany the electronic copy of Form 2 as an electronic file. The text of the constitution should follow closely the requirements set out in regulation 4 but need not comply in every detail.

**7. Signed declaration that the membership of the FPA will be representative of owners within the area:** The DWAF

Fire Adviser should be satisfied that the declaration is true and the signature is that of the Chairperson of the FPA, the FPO or a similarly responsible person. The declaration states, "To the best of my knowledge all owners within the area of the FPA have had an opportunity to join the FPA and that the area has not been defined in such a way as to deliberately exclude any owner from the FPA".

**8. Record of any objections to the formation of the FPA:** Attach a list of the names and addresses of those objecting, and describe the nature of objections raised, if any. The DWAF Fire Advisor should be satisfied that the return is a reasonable reflection of the real situation.

**9. Particulars of the Fire Protection Officer of the FPA**

**9.1 Name and contact details**

**9.2 Attach CV and provide details of two referees:** The Act requires that the proposed FPO must "be able to enforce the Act in a responsible manner", i.e. the candidate must be able and responsible. See page 9 for criteria that might be used by the DG to determine this.

**9.3 Is the FPO the Chief Fire Officer of your Fire Service?** The Act requires that the local Chief Fire Officer should be the FPO unless he/she declines the position. If there is more than one Fire Service within the area of the FPA, then the FPO must be appointed from among the willing candidate CFOs.

Where there is no municipal Fire Service within the area, then the FPO cannot be the CFO. Note that the local Fire Service will be the function of metropolitan local government in the case of Metropolises, or the Local Municipality in the case of District Municipalities unless District government executes the service as an agency for the local municipality.

If a CFO is not appointed then the reasons for this must comply with the provisions of the Act, i.e. either (a) the CFOs have declined or (b) there is no CFO in the area of the FPA.

**9.4 Have there been any objections to the appointment of the person named above as FPO?** If yes, please specify (a) how objections have been resolved, if so and (b) the nature of any outstanding objections: This provides an independent check on the acceptability of the designated FPO to members of the FPA, and appears here because of some stakeholders' concerns about the competence of available CFOs relative to the magnitude of the risk management problem.

Outstanding objections must be evaluated in terms of the likelihood that objectors' safety will be put at unreasonable risk should the designated FPO be registered.

**9.5 Does the FPA require the Director-General of DWAF to designate an officer of the Department to act as its FPO? Section 6(4) of the Act states that the DG may designate an officer or employee of the Department to act as the FPO if the FPA does not have the means to do so itself.**

Note that, if the FPA requires the Department to designate an FPO, then the relevant DWAF Cluster Manager should indicate in 18 below that a competent person will be available for this duty from his/her staff complement. There is more about FPOs on page 8.

**10. Attach a copy of the business plan of the FPA:** A copy of the FPA business plan must be attached to the application, as an electronic file in the case where the FPA has completed its application electronically. DWAF has developed a guide to FPAs for the development of business plans, which is available from any Fire Advisor or DWAF national office. There is also an article on business plans on page 18.

**11. Particulars of the rules of the FPA:** The rules of the FPA should be contained in the business plan. See page 35 for more about rules.

**12. Umbrella association that will support the FPA (if any):** The name of the umbrella and its Chief Executive Officer should be given. A list of the services to be provided should be given and the Chief Executive Officer should confirm that the umbrella will be providing these services to the FPA. See page 7 for more on umbrellas.

**13. Description of the capability of the FPA:** The National Veld and Forest Fire Act requires that the Minister must be satisfied about the capability of the FPA 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 this should be done under 13. The business plan of the FPA must be the primary source of evidence of capability.

The capability indicated in the business plan must measure up to the overall level of risk assessed for the area of the FPA. The overall level of risk assessed for the FPA must approximate the veldfire risk profile for the local municipality, as assessed in the national

risk assessment, done by DWAF. Additional evidence of capability provided in 13 must supplement the business plan, rather than constituting primary evidence of capability.

Where the FPO is not the local Chief Fire Officer and a Fire Service exists within the municipality(ies) that include the area of the FPA, include a description of agreements to co-operate with the Chief Fire Officer or refer to contents of the business plan where this is set out. Appropriate assistance agreements should exist, if necessary, with the relevant Fire Services for the rendering of firefighting and other services to members of the FPA, as evidenced by this entry or by the contents of the relevant part of the veldfire management strategy.

**14. Approval of the application to register the FPA:** Attach a copy of the minutes of the meeting(s) at which a majority of FPA members approved:

- (a) the constitution of the FPA;
- (b) the appointment of the FPO;
- (c) the business plan; and
- (d) this application.

**15. Signed statement by an appropriate representative of Local Government (District or Metropolitan or Local Municipality) of commitment to the FPA:** The person signing the statement may be (a) the Mayor, (b) the Chairperson of the Executive Committee or (c) the Municipal Manager, but should not be the same person as the one in 16 below.

**16. Declaration by the representative of the FPA that the information in Form 2 is true and correct:** The person signing this should be the same as in 2.

**17. Recommendation by the regional representative of DWAF that the FPA be registered:** The DWAF Fire Advisor for the area should be satisfied that the registration application is properly founded. By signing, the Fire Advisor is also indicating that he/she has shown due diligence in the administration of the form.

**18. Declaration by the Cluster Manager of DWAF that the FPA should be registered.**

# HOW WILL THE MINISTER DECIDE WHETHER TO REGISTER AN FPA?

**Please note: the Minister is under no legal obligation to take the following considerations into account in making his/her decision. These are simply guidelines that the Department has drafted to give an example of criteria that may be used by the Minister. DWAF reserves the right to change this guideline without notice.**

The Minister must register and issue a certificate to an FPA if it is capable of performing its duties, and is representative of the owners in its area (noting also that all owners within the area concerned must be free to join the FPA).

To judge capability, the Minister will need to have information on the resources, skills and knowledge available to owners within the intended area of the FPA. Discretion will be needed in evaluating capability, since many owners, including municipalities, in certain districts will have very limited resources, but still need to form FPAs.

The existence and role of umbrella FPAs will need to be considered when assessing capability. Umbrella associations may relieve FPAs of certain needs to maintain capacity. See more on umbrellas on page 7. Criteria for capability include the contents of the FPA's business plan with regard to:

- its compliance with the requirements of the Act and the regulations;
- the nature and level of veldfire risk identified by the business plan for the area;
- the degree to which the veldfire management strategy addresses the requirements to manage this risk;
- the fitness of the rules; (see also page 35)
- the resourcing of the FPA including the support it will receive from any umbrella association; and
- the capability of the FPA relative to the nature and level of veldfire risk within its area, including:
  - evidence among owners of previous co-operation in managing the environment (e.g. previous membership of a Fire Control Committee or a Fire Protection Committee, participation in soil

conservation committees, LandCare programmes, or ward or Tribal Authority development plans, or relevant Land Development Objectives (LDOs) in Integrated Development Plans (IDPs) that reflect collective work on environmental management, or nature conservancy planning);

- evidence of common purpose and commitment to veldfire management;
- leadership and management skills, including financial management (of the Executive Committee);
- individual and institutional (public, private and NGO) competence in veldfire management;
- acceptable boundaries, relative to the nature and extent of the veldfire management issues within the area of the proposed FPO;
- where there is a Chief Fire Officer in the FPA who is not the Fire Protection Officer, evidence of existing or intended co-operation between the Fire Protection Officer and the Chief Fire Officer;
- evidence of support from local government for the FPA;
- the ability of the proposed Fire Protection Officer to enforce the Act in a responsible manner; and
- any other relevant information.

To judge representivity, the Minister will need to receive information on the boundaries of the area of the FPA, the properties within it and the owners of these properties, and the owners who have agreed to join the FPA. Criteria for representivity would include:

- the proportion of owners within the area of jurisdiction of the FPA supporting its formation;
- any objections made to the formation or registration of the FPA;
- any evidence of the exclusion of any owner;
- any evidence that vulnerable communities or assets have been unreasonably excluded from the area; and
- any other relevant information.

# CONSTITUTION FOR FIRE PROTECTION ASSOCIATIONS

The regulations set out a model constitution for you, which you can change according to your needs. Your FPA's constitution should contain the following:

## General provisions

- Name and address of the FPA and a description of the area of the FPA that your members can understand. You can attach a map if you want to.
- A statement noting that the constitution is in accordance with Chapter 2 of the National Veld and Forest Fire Act, 1998 (No. 101 of 1998) and the regulations under it.
- The aim of the FPA, which is to predict, prevent, manage and extinguish veldfires in its area and its duties set out in section 5 of the Act.

## Membership

- A section on membership, stating that any owner in the area of the FPA may at any time become a member, provided he/she undertakes to abide by this constitution and the rules of the FPA.
- The Secretary of the FPA must keep a register of members. The constitution should describe what information the register should have.
- Voting rights: how voting will work. A suggestion is that at any meeting where voting is required, each member will have one vote.

## Rights and duties of members

- Set out the rights and duties of members. For example, a member must pay any fees and charges set by the FPA, is entitled to enjoy all the benefits of membership and must comply with the FPA's rules.
- Also explain when membership will be terminated; membership may be automatically terminated if a member does not pay the membership fees, charges or interest within a certain number of days after the annual general meeting.
- Remember that State and municipal owners cannot have their membership terminated.

## Membership fees

- Membership fees, charges for services supplied by the FPA and interest on unpaid amounts will be

- determined by the FPA in terms of its rules.
- Explain how membership fees will be determined: fees could be calculated per hectare, for example. Or members requiring more services could pay higher fees (e.g. for aerial support).
- The FPA may exempt any member from paying fees and charges, while still awarding him or her full membership status. The constitution should explain what process will be used to determine who should be exempted.
- The constitution should set out when membership fees are payable, and what the process is for increasing them.

## Liability and powers of FPA

- Liability of members: explain that members are not personally liable for any claims against, debts owed by or omissions to carry out duties of the FPA.
- Powers of the FPA: take care to include all the powers you feel the FPA will need to carry out its business, for example, the FPA may acquire and dispose of any asset, hire employees, and take out loans. Set out the procedures the FPA must go through to do these things, e.g. calling a general meeting of members.

## Executive Committee

- Set out what positions there will be in the executive committee, for example, Chairperson, Treasurer and Secretary.
- Set out how long the terms of office are.
- Specify how an office bearer can be removed from the Executive Committee. For instance, if they have been absent without an apology and a good reason at two consecutive meetings of the Executive Committee.

## Financial year

- The regulations set out that the financial year of the FPA runs from the date of its registration to 31 March of the following year, and then from 1 April every year to 31 March of the next year.
- The Secretary is usually responsible for all the FPA's financial business and must present an audited financial statement at the annual general meeting, but if the FPA has a treasurer, obviously this person will be responsible.



## ANNUAL REPORT OF A REGISTERED FPA

A registered FPA must submit an annual report to the Minister by 30 June every year. DWAF wants the FPA to include the following in the annual report:

- a progress report on the attainment or otherwise of -
  - the aim and objectives specified in the business plan; and
  - the implementation of the business plan as a whole;
- 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 by section 6(1)(e);
- any other matters or observations that relate to successes in or problems with the management of veldfires;
- a report on how organs of State and municipalities have or have not complied with the rules of the FPA;
- 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 plan that have been made to improve the functioning of the FPA; and
- any other relevant information.

The Minister can make available within a reasonable time to any interested party the information about veldfire management contained in the annual reports.

### Annual and special general meetings

- Describe how the annual general meeting will be called, what it will discuss and what constitutes a quorum. The annual report should be given at the AGM. DWAF requires the annual report to be submitted to it by 30 June each year.
- Special general meeting: when may a special general meeting be convened, and what will its quorum be?



*The annual general meeting gives FPA members an opportunity to speak out*

### Dispute resolution

- How will disputes between members be resolved?
- An example is: if negotiations between members to resolve a dispute fail, any member of the FPA may approach the Executive Committee, which must appoint an arbitrator whose decision will be final.

### Dissolution of the FPA

- How will the FPA be dissolved?
- For example, it could be dissolved by a general meeting called for that purpose or the Minister may deregister it in terms of section 8 of the Act.
- The constitution must specify how the general meeting would dissolve it, eg. The resolution to dissolve the FPA must be passed by a two-thirds majority of members present, so long as enough members are present for there to be a quorum.

# AN FPA'S BUSINESS PLAN

## Duties of FPAs

The Act sets out in Section 5 the duties of a Fire Protection Association. Here the Act states that an FPA must at least:

- a) develop and apply a veldfire management strategy for its area;
- b) provide in the strategy for agreed mechanisms for the co-ordination of actions with adjoining fire protection associations;
- c) make rules which bind its members;
- d) identify the ecological conditions that affect the fire danger;
- e) regularly communicate the fire danger rating to its members;
- f) organise and train its members in fire fighting, management and prevention;
- g) inform its members of equipment and technology available for preventing and fighting veldfires;
- h) provide management services, training and support for communities in their efforts to manage and control veldfires;
- i) supply the Minister at least once every 12 months with statistics about veldfires in its area;
- j) furnish any information requested by the Minister in order to prepare or maintain the fire danger rating system;

- k) exercise the powers and perform the duties delegated to it by the Minister; and
- l) appoint a Fire Protection Officer, unless there is a Chief Fire Officer who is willing to assume the powers and duties of a Fire Protection Officer.

The Department has developed a guide for FPAs to develop business plans to address each of these duties. It has been developed in consultation with a reference group drawn from interested and affected parties. The consultation involved two workshops during 2001, another in April 2002, and a subsequent invitation to send comments by mail. The guidelines also draw from an extensive review of the literature on veldfire risk management.

The FPA's business plan is built logically around the core requirement of a veldfire management strategy, which in turn is based upon the method of risk management. The guideline prescribes the minimum requirements and structure required by the Department to evaluate and approve the business plan and be satisfied that the FPA will be able to fulfil its duties. Copies of the guidelines are available at any DWAF office. DWAF Fire Advisers can assist FPAs to draw up their business plans.

## WHY does the FPA need a business plan?

South Africa is a country of great social, economic and ecological diversity. It is impossible to have a blueprint for the management of a phenomenon such as veldfires for the country as a whole. Local knowledge and judgement must determine the way veldfires are managed. The final responsibility for veldfire management lies with the owner of the land. The Act affirms this clearly. Veldfire management within an FPA must be a balance between the plans of the individual landowners, and the collective plans of the FPA, established for the common good.

Approval of the business plan is a requirement for the registration of any FPA. Through registration an FPA will be empowered by the Act. Registration is also required for the recognition of the FPA's Fire Protection Officer. In addition, the veldfire management strategy of an FPA will form the veldfire component of your local disaster management plan.

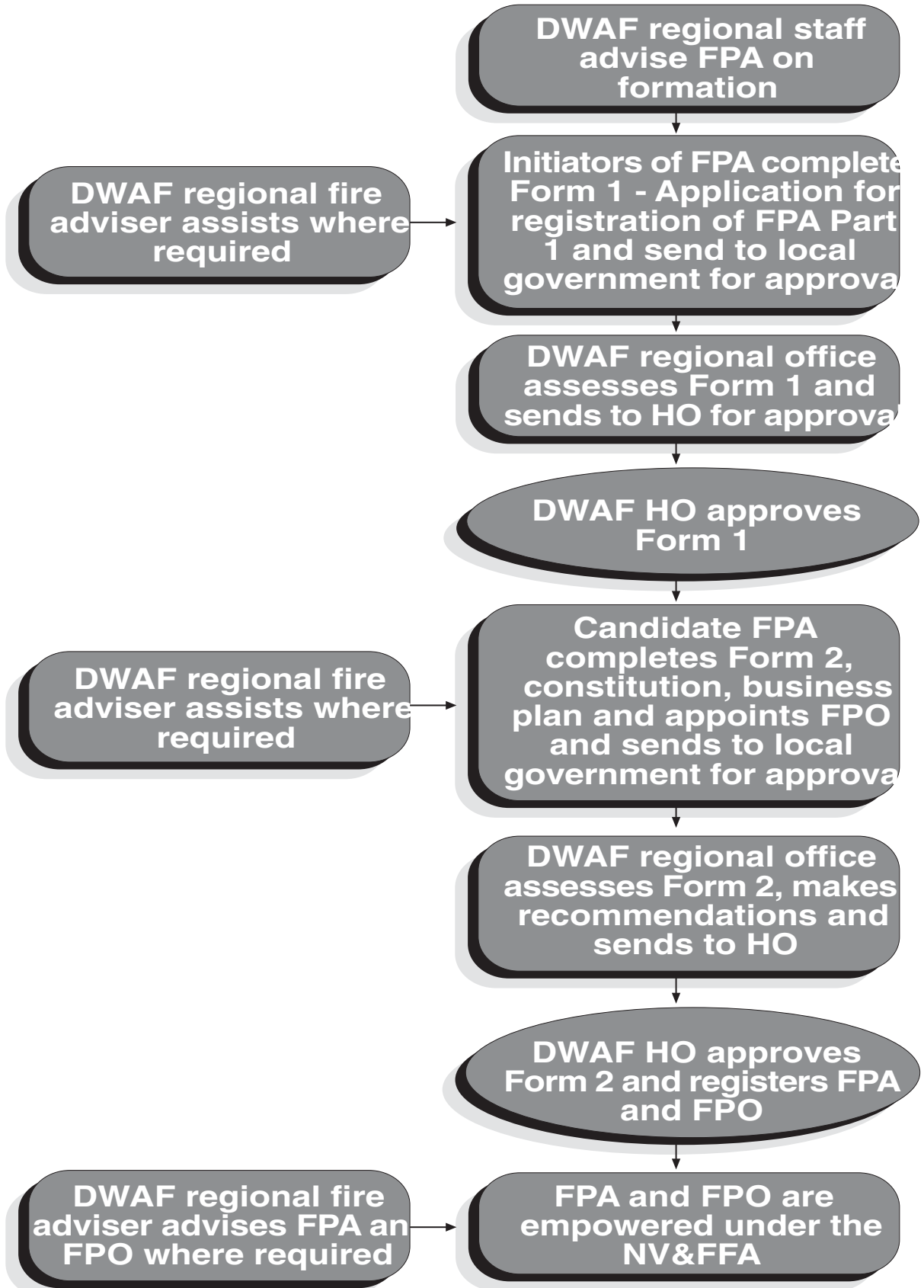
The business plan is needed for the registration of the FPA, for several reasons:

- to show that it is capable of managing veldfires in its area;

- to demonstrate an adequate understanding of the veldfires risks in its area and how to manage them;
- as proof that its members understand the risks and agree with the strategies and measures adopted in the plan;
- to provide the reasons for the rules that it will apply. When the FPA is registered, it will receive the powers to implement these rules. The National Veld and Forest Fire Act makes provision for the delegation of additional powers and duties for veldfire risk management. For these reasons, the strategy and its rules need to be read together as the basis for the empowerment of the FPA;
- to promote common standards and co-ordination among FPAs, municipal fire services, and disaster management;
- to provide information that can be used to build a countrywide picture of veldfire risks and the resources needed to manage them.

The guideline will be useful to the FPA because it provides a framework for a consistent, diligent and efficient approach to veldfire management across South Africa, and for co-ordination with related aspects of managing resources and the environment.

# STEPS IN THE REGISTRATION PROCESS FOR FIRE PROTECTION ASSOCIATIONS



# SUMMARY OF THE REGULATIONS

## CHAPTER 1: GENERAL PROVISIONS

- Regulation 1. Short title: the regulations will be known as the Fire Protection Association Regulations.  
 Regulation 2. Definitions: the meanings of certain words used in the regulations.

## CHAPTER 2: FORMATION OF FIRE PROTECTION ASSOCIATIONS

- Regulation 3. Formation of an FPA: who must attend the founding meeting, how voting will be done and what the minutes should cover.  
 Regulation 4. Constitution of an FPA: what should be in the constitution. A model constitution is also attached in the Appendix.

## CHAPTER 3: APPLICATION AND REGISTRATION OF FIRE PROTECTION ASSOCIATIONS

- Regulation 5. Application for registration of an FPA: indicates some of the information that will be required in Form 1 and Form 2, which are available at DWAF offices.  
 Regulation 6. Registration of an FPA: sets out the procedure the Minister will follow to register an FPA.  
 Regulation 7. Deregistration of an FPA: when the Minister will deregister an FPA and what process he/she will follow.  
 Regulation 8. Change of boundaries of a registered FPA: what to do if a registered FPA wants to change its boundaries.  
 Regulation 9. Change of membership of the executive committee of a registered FPA: what to do if a registered FPA wants to change its executive committee.  
 Regulation 10. Fees: the Minister can charge a fee to provide a constitution of an FPA or information in the register of FPAs.

## CHAPTER 4: FIRE PROTECTION OFFICERS

- Regulation 11. Appointment of an FPO: how an FPO is appointed and how long the appointment lasts.  
 Regulation 12. Proof of appointment of an FPO: what the FPO's identification card should have on it.

## CHAPTER 5: APPLICATION AND REGISTRATION OF FIRE PROTECTION OFFICERS

- Regulation 13. Application for registration of an FPO: some of the information on Form 2, which is available from DWAF offices.  
 Regulation 14. Registration of an FPO: sets out the procedure the DG will use to register an FPO.  
 Regulation 15. Deregistration of an FPO: when the DG will deregister an FPO and what procedure he/she will use.

## CHAPTER 6: FINANCES AND ACCOUNTABILITY

- Regulation 16. Financial year of a registered FPA: 1 April to 31 March.  
 Regulation 17. Annual report of a registered FPA: must be submitted by 30 June every year on its activities and the achievements of its objectives.

## CHAPTER 7: REPEAL OF REGULATIONS

- Regulation 18. Repeal of regulations made under the Forest Act, 1984: regulations 24, 25 and 26 published in Government Gazette 10158 on 27 March 1986 are repealed.

## CHAPTER 8: TITLE

- Regulation 19. Short title: the regulations will be known as the Fire Protection Association Regulations.

- APPENDIX: MODEL CONSTITUTION FOR FPA : sets out the information an FPA constitution should have in it.

# THE FOUNDING MEETING

## Calling a founding meeting

- Publish notification in the media (keep copies to attach to Form 2);
  - Support with a promotion drive, e.g. road show, posters, and lectures (with DWAF support).
- Mpumalanga initiators took the following actions:
- a DWAF Fire Advisor did a road show ~~24~~ presentations to tribal authorities, farmers' associations and city/town councils;
  - 100 posters were put up;
  - a notice was published in *The Lowvelder*;
  - All members of the FFA (Nelspruit) were faxed, as well as Eskom, the Fire Brigade, The Rural Action Committee, Spoornet, the Institute for Tropical and Subtropical Crops, Agri-SA and the Mpumalanga Parks Board;
  - Ensure that all reasonable steps are taken to invite all owners;
  - Prepare an agenda to circulate;
  - Invite all Chief Fire Officers for the area. They can authorise in writing another person to attend their behalf.

## Purpose of a founding meeting

- To vote on establishing an FPA;
- To give the FPA a name;
- To confirm the FPA's boundaries;
- To elect an Executive Committee;
- To nominate a Fire Protection Officer;
- To approve the process of applying for registration.

## Agenda of a founding meeting

- Elect chairperson of meeting;
- Explain the process and what the FPA is about;
- Allocate votes;
- Confirm support for establishing the FPA;
- Decide on a name;
- Confirm proposed boundaries;
- Elect Executive Committee;
- Assign tasks to Executive Committee;
- Nominate Fire Protection Officer;
- Get approval to prepare Form 1, "Application for registration of FPA Part 1".

## How are votes allocated?

- Only owners as defined in the Act can vote (see page 5);
- Owners who represent themselves personally at the founding meeting get one vote each e.g. Mr Small game farm owner present at the meeting, gets one vote;
- Any owner or organisation who represents another owner or owners gets one vote per owner so represented e.g. Emanzini Farmers' Union, which is representing 22 small scale farmers, gets 22 votes;
- Owners who are represented by another owner or an organisation, but who are present at the founding meeting may not vote (because the other owner or organisation is already voting for them). Ms Mthimkulu, who is represented by Emanzini Farmers' Union, may attend the meeting but may not vote. She has already given the Farmers' Union a mandate to vote on her behalf.

### Checklist of outputs from a founding meeting

- An attendance register with everyone’s contact details and property names on it, including the names of the organisations or owners representing other owners. The register must also indicate which owners were represented by them. Contact details include name, postal address, telephone numbers, cell phone numbers, fax numbers and e-mail addresses;
- Where a Chief Fire Officer has authorised in writing another person to attend on his/her behalf, a copy of that written authorisation;
- Name of the FPA;
- Address of the FPA (if known);
- Minutes indicating:
  - The number of votes for establishing the FPA;
  - The number of votes against;
  - The number of abstentions;
- Confirmation of proposed boundaries;
- Names of the Executive Committee;
- The name of the nominated Fire Protection Officer;
- Agreement to prepare Form 1, “Application for registration Part 1”.

## WHO IS AN “OWNER”?

The Act says that owners may form FPAs to predict, prevent, manage and extinguish veldfires. It is not compulsory for most owners to join an FPA if one is registered in the area they live in. However, the “Owner” has its common law meaning and includes the following owners must join an FPA if one has been registered in the area.

- any landowner with a title deed to property;
  - a lessee or someone renting land;
  - any person controlling land;
  - the executive body of a community set up under its constitution, law or custom;
  - the manager of State land;
  - the chief executive officer of any local authority.
- The owners of State land, whether it is held by the national or provincial government;
  - The owners of trust land, which usually means the executive body of the community exercising control over that land;
  - A municipality within the area of the FPA, if it has a Fire Service.



*The Act says that owners may form FPAs to predict, prevent, manage and extinguish veldfires*

# FPA BOUNDARIES

Section 3 says that any group of owners who wish to co-operate for the specific purpose of predicting, preventing, managing and extinguishing veldfires may form an FPA.

The Act does not specify any detail about the scope of the area to be covered by an FPA, but does state that the area should be relatively uniform in terms of the risk of fires occurring, climatic conditions, or types of forest or (other) vegetation, or it may simply be an area which experiences regular veldfires.

Bearing in mind the purpose of the Act, FPAs would be formed only in areas where they are definitely needed. Given the duties of FPAs and Fire Protection Officers, there would need to be sufficient reason for owners to agree to these commitments before the benefits of co-operation would exceed the costs.

Similarly, the extent or area within the jurisdiction must be optimum, depending on circumstances. At some sizes, the area or number of members would be too big for the FPA and the FPO to fulfil their duties properly, or too small to justify the costs.

The Act leaves this matter open, and once more each case must be judged on its particular circumstances. A reasonable approach is needed, based on the facts, common sense, and adequate planning.

There are various advantages to having FPA areas that coincide with local government boundaries. These include co-ordination with other initiatives, such as disaster management planning and through this, co-operation with local fire and emergency services of different kinds. Agreement with municipal boundaries is useful because this will make for easier administration including 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 entirely 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 for an FPA to include too wide a range of ecological conditions, or to be configured in such a way that the veldfire management strategy becomes impractical.

The validity of the reasons given will be judged by DWAF and will be assessed by discussion with the applicant, but should carry the support of the Chief Fire Officer where there is a municipal fire service. 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.

## HOW DO MUNICIPAL BOUNDARIES WORK?

Each District Municipality (Category C municipality) or Metropole (Category A) contains several Local Municipalities (Category B). Each FPA may usefully correspond with one or more Local Municipalities but is not essential for them to do so.

## Contact information for the Municipal Demarcation Board

The Municipal Demarcation Board has demarcated a total of 284 municipalities: six metropolitan municipalities, 47 district municipalities, and 231 local municipalities. Details of the boundaries of municipalities are available from the Board:

Website: [www.demarcation.org.za](http://www.demarcation.org.za)  
Postal address: Private Bag X28, Hatfield 0028, Pretoria.  
Telephone: 012 342 2481  
Fax: 012 342 2480  
E-mail: [info@demarcation.org.za](mailto:info@demarcation.org.za)

# UMBRELLA FPAs

The Act provides for umbrella FPAs for a number of FPAs (section 4(9)). The intention is that an umbrella would provide a variety of defined services to the FPAs that fall within its area.

Umbrellas, obviously, are required only where more than one FPA exists and require supporting services in common with other FPAs served by the umbrella. Umbrella FPAs should therefore be formed when several FPAs would benefit from shared services from such an organisation. FPAs served by a single umbrella need not be contiguous or neighbouring each other.

Umbrellas should ideally be formed to coincide with either (a) Districts or Metropoles, or (b) Provinces, to co-ordinate with Disaster Management Centres, but need not confine their scope in this way if circumstances require jurisdictions that cut across such boundaries.

Formation of an umbrella association may be initiated by any FPA, the Disaster Management Centre or any group of people or organisations that wish to organise for the purposes of the Act. Any umbrella must include within its scope at least two FPAs or proposed FPAs. An umbrella should not include more than a manageable number of FPAs within its scope.

The Act does not require an umbrella to be registered but, in order for it to carry powers under the Act, the Minister will need to recognise the umbrella. If satisfied as to the need and desirability of the proposed umbrella, the Minister will recognise the umbrella in writing and give the required written delegations.

The kinds of services that may be performed by an umbrella FPA include:

- communicating fire danger ratings to FPAs and others;
  - weather data collection for improvements to the predictions from the National Fire Danger Rating System (NFDRS), and collection and dissemination of other relevant data and information;
  - providing input data for fire danger ratings on behalf of its FPAs, such as veld curing information (the rate at which veld dries);
  - training, in cases where training is not provided by the training industry;
  - communication to landowners and the public regarding veldfire management in the area;
  - supply of fire incident command specialists or support and co-ordination between FPAs and other fire fighting agencies in escalating fire conditions;
  - assistance to members of FPAs where court cases arise, such as providing expert witness, and statistical and weather information;
  - facilitating mutual aid agreements (between parties within the umbrella association);
  - management and maintenance of aerial support services;
  - co-ordination functions, such co-ordination of equipment and other resources between individual FPAs, through such measures as mutual assistance agreements and the standard operating procedures they contain;
  - overall strategic direction and planning, including the contributions to local disaster management plans;
  - providing equipment, personnel and training standards, where the fires services have not provided these;
  - helping new FPAs to establish themselves in the area covered by the umbrella organisation, in cases where FPAs are still needed
- strategic policy and planning for the common area administered by several FPAs, e.g. for prescribed burning, common standards, common rules, joint fire preparedness and response plans, and the protection of common assets;
  - appointment of a common FPO who would delegate certain powers and duties to the member FPAs;
  - liaison and co-ordination with the provincial and local Disaster Management Centres



# THE FPO

## Who will be the FPO?

Where a municipality is a member of the FPA the amended Act states that its chief fire officer (CFO) must be appointed as FPO if he or she is willing. This is because the Constitution, for good reason, assigns fire services to the local government sphere. If there is more than one Fire Service within the area of the FPA, then the FPO must be appointed from among the willing candidate CFOs. Where the CFO is not willing, the FPA must appoint a FPO from other possible candidates. The regulations state that the FPO must be a member of the FPA.

## Term of office of an FPO

The term of office is for as long as the FPA is satisfied with the FPO's performance. But if the FPO is the CFO, then the term of office continues for as long as the CFO holds that position. If FPO has stopped performing his or her duties or there is a vacancy in the office of FPO, then FPA Executive Committee must call a special general meeting within 14 days to appoint a new FPO, unless the vacancy arises within 60 days of the AGM in which case the FPO will be appointed at that meeting.

## Differences in roles

	Method of appointment	Criteria for appointment	Length of appointment	Job description
FPO	CFO if willing or appointed by FPA	Must have qualifications and experience which will require DG to register (ie DG is satisfied FPO is able to enforce the Act in a responsible manner)	If CFO: as long as he/she remains CFO  If appointed, as long as FPA is satisfied with performance	Chief executive officer of the FPA - has the authority to manage the organisation, while taking his or her direction from the FPA or its executive committee  Primary point of responsibility for prevention and management of veldfires in FPA's area  Undertakes responsibilities set out in Act
Chief Fire Officer	Appointed by local authority under Fire Brigade Services Act	Must have qualifications and experience prescribed by Fire Brigade Services Act	Until resigns or contract is terminated	Undertakes responsibilities for fire service  Plays role in combating fires wherever they occur. In rural areas, works with FPO to do this
Chairperson of FPA	Elected by FPA	Determined by FPA	Depends on FPA constitution	Responsible for running the FPA's administrative and organisational side  Chairs meetings, approves agendas and minutes, ensures FPA finances are properly kept  Ensures FPO doing his/her duties effectively

## Duties of the FPO

The FPO must perform the role of chief executive officer of the FPA, in other words, the FPO has the authority to manage the organisation, while taking his or her direction from the FPA or its Executive Committee.

He or she has the duties to monitor and report to the FPA and the Minister as required by the Act, and to train members on the law, in the rules and on prevention and fighting of fires (once more, in this latter case, this can be done through appropriate training institutions)

The FPO is empowered by the Act to take control of a veldfire on any property if it is a threat to life or property (and any owner, whether a member or not, with a veldfire on his or her property that threatens life property or the environment must report it to the FPO). When taking control of the fighting of a fire, the FPO may order any person who is apparently not younger than 16 years and not older than 60 to assist in the fighting of the fire. Note, however, that the FPO must act reasonably and not assign tasks and duties to such a person if he or she is not fit to do them.

He or she is further empowered to enforce the rules of the FPA, to inspect the land of members for compliance with the rules, to enter and search property without a warrant under certain conditions, to stop enter and search any vehicle or any beast of burden, under reasonable suspicion of an offence. The FPO may enter the land of a member of the FPA on reasonable notice to carry out his/her duties. FPOs also have powers of seizure and arrest (sections 28 and 29). The FPO may delegate his or her powers and duties, except powers of arrest, search and seizure.

If an FPO proposed by the FPA does not meet all requirements then the person nominated should demonstrate the potential to achieve the desired competence within a reasonable period as proposed by the FPA and agreed by the Minister.

The Act allows for cases where FPAs cannot appoint an FPO, by empowering the DG to appoint an “officer or employee of the Department” as an FPO for a fixed period, which may be extended (section 6(4) and (5)).

### Registration of FPOs

FPOs must apply to the Director-General (DG) of the Department for registration. An FPO must be registered to have the powers given by the Act. The DG must register an FPO who is able to enforce the Act in a responsible manner. The level and kind of competence required of an FPO should measure up to the needs of the FPA. For example, if the FPA has many plantations forests in it, then competence in fighting forest fires would be a prerequisite.

## Criteria that the DG may take into account in deciding whether to register an FPO

Please note: the DG is under no legal obligation to take the following considerations into account in making his or her decision. These are simply guidelines that the Department has drafted to give an example of criteria that may be used by the DG. DWAF reserves the right to change this guideline without notice.

Criteria that may be used are:

- whether the curriculum vitae or the testimony of the referees or both confirm that the proposed fire protection officer has or will within a reasonable time have:
  - adequate knowledge of veldfire conditions, behaviour and control within the area of the FPA;
  - adequate skills and experience in the management and fighting of veldfires;
  - certified qualifications appropriate to the level of veldfire risk within the area of the FPA;
  - previous experience in managing firefighting resources appropriate to the needs of the FPA;
  - experience in the technologies of veldfire management appropriate to the level of veldfire risk within the area of the FPA;
  - proven co-ordination, command and control skills appropriate to the needs of the FPA;
  - proven negotiation and facilitation skills appropriate to the needs of the FPA;
- whether there is any substantive objection to the appointment of the fire protection officer;
- the nature and level of support that the FPA will receive from an umbrella association or other sources; and
- any other relevant information.

# WILL HELP IT DO ITS DUTY



*All interested parties should be involved in developing a strategy for an FPA*

South Africa is a country of great social, economic and ecological diversity. It is impossible to have a blueprint for the management of a phenomenon such as veldfires for the country as a whole. Local knowledge and judgement must determine the way veldfires are managed. The final responsibility for veldfire

management lies with the owner of the land. The Act affirms this clearly. Veldfire management within an FPA must be a balance between the plans of the individual landowners, and the collective plans of the FPA, established for the common good.

## Communication and consultation

It is important to develop the strategy for an FPA by involving all interested parties. Stakeholders to be involved in the risk assessment should include the following:

- Landowners, that is owners as defined in the Act, which include landowners in the normal sense of the word, lessees and others who use the land by similar contracts, the representatives of communities on communal land; (see page 5)
- For communities on communal lands, also their representatives on the municipal council or ward committee, as well as their traditional leaders where appropriate;
- Eskom, whose power lines are vulnerable to veldfires;
- Provincial and national government departments;
- Catchment Management Agencies or Forums;
- Local farmers' associations;
- The local fire service;
- Nature conservancies;
- Local or provincial Disaster Management Centres;
- Municipalities and their sub-structures;
- Nature conservation agencies and NGOs;
- Fire fighting associations;
- Land Development Committees and LandCare Committees.

The veldfire management strategy must address all aspects contained in the guideline, but in a manner appropriate to the veldfire management problems in your area and to the level of resources available to you.

FPA's will need to revise their veldfire management strategies, improved in the light of their monitoring of performance and review of strategy, and submit these for approval by DWAF every five years.

**Step 5.5:** use your ratings in Steps 5.2 and 5.4 to classify the levels of fire risk associated with the exposure of the asset to the hazard, following Table 5. Bear in mind the descriptions of risk levels in Table 6. Enter this in Column 7.

**Table 5:** Levels of risk, assessed as the product of likelihood and consequence

	Consequence rating				
Likelihood rating	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	M	M	H	E	E
Likely	L	M	H	E	E
Possible	L	M	H	H	E
Unlikely	L	L	M	H	E
Rare	L	L	L	M	H

**Table 6:** Descriptions of risk levels

Description		
E	Extreme risk	Must receive first priority for management; will require involvement of the local Disaster Management Centre.
H	High risk	Must receive second priority management.
M	Medium risk	Routine management required.
L	Low risk	No management required.



*An open flame gets out of control in Tingono settlement. How do we rate the risk of such events happening and what their consequences will be? Table 6 tells us this is an extreme risk*

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
Asset group	Hazard	Likelihood assessment	Likelihood rating	Consequence assessment	Consequence rating	Risk rating
Social asset: Tingono settlement	Fire spreading from open flames inside Tingono settlement	Open flames are used for cooking and heating and every year fires spread in the settlement	Almost certain	Loss of property is severe, major risk of injury or death during the fire	Catastrophic	Extreme

## Full tables for social, economic and environmental assets at risk

The tables on pages 29, 30 and 31 are the product of a veldfire risk analysis. It is easy to see now why a risk analysis must involve effective communication and consultation. This is because:

- Risk management is often, if not always, a process involving a lot of judgement, and the knowledge that comes from experience. Consultation mobilises the common sense, judgement and experience of members.
- Diverse and sometimes conflicting interests need to be accommodated in the strategy.
- Risk management requires agreement in risk assessment, and the final selection of management strategies. In effect, consultation must involve negotiation to the point of agreement among members on the choice of options and strategies.
- Communication is vital to gather all the necessary information, as well as to educate members on how to choose and implement risk management strategies.



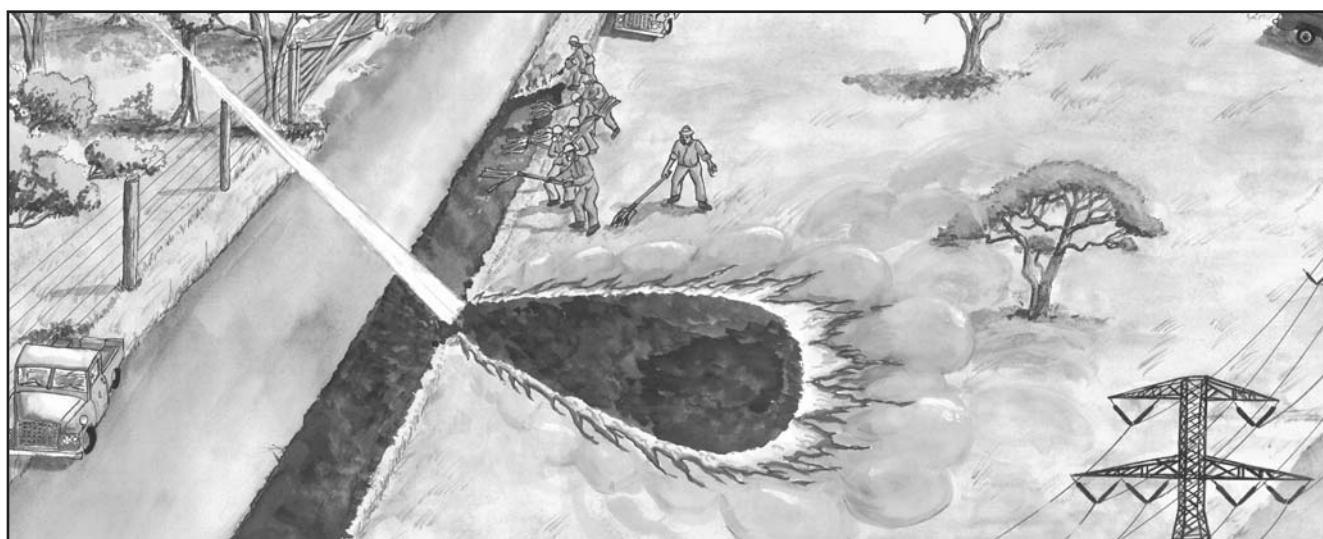
*Tingono settlement (top left) is a social asset. If it were exposed to the risk of veldfire, there could be damage to property and loss of lives*

Table 7: List of social assets within the area of the Entabeni FPA with an analysis of the veldfire risk for each and the levels of risk assessed

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
Asset group	Hazard	Likelihood assessment	Likelihood rating	Consequence assessment	Consequence rating	Risk rating
Ruiterslaagte town	Grassland fires (extreme conditions), plantation forests, alien invasive trees and the town itself.	The town is reasonably well protected, with effective management plans in place. This reduces the likelihood of impacts on the town.	Unlikely	Loss of property is significant; moderate risk of injury during fire fighting.	Moderate	Medium
Tingono settlement	Grassland fires (extreme conditions), plantation forests, alien invasive trees and the settlement itself.	Similar to above. However, shacks are more fire-prone and there are few roads; access is difficult.	Likely	Loss of property is significant; High risk of injury during fire fighting.	Moderate	High
Farmsteads and resorts	Grassland fires (extreme conditions), plantation forest, alien trees.	Although the extreme conditions occur every 2 years, the homesteads are well protected.	Possible	Possibility of the loss of houses and injury during fire fighting.	Moderate	High
Iron Age sites	Grassland extreme, plantation forest, alien trees.	Sites are generally quite exposed and are likely to be burnt quite often but are protected by the old stone walls.	Likely	No loss	Insignificant	Low

**Table 8: List of economic assets within the area of the Entabeni FPA with an analysis of the veldfire risk for each and the levels of risk assessed**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
Asset group	Hazard	Likelihood assessment	Likelihood rating	Consequence assessment	Consequence rating	Risk rating
Stock farms	Grassland fires (extreme conditions)	Most farms have fire protection plans but historically every three years several farms are burnt when grassland fires cross their boundaries under extreme conditions.	Likely	Substantial loss of pasture requiring purchase of fodder; frequent stock losses.	Moderate	High
	Grassland fires (average conditions)	Occur every year on many stock farms.	Almost certain	No significant losses.	Insignificant	Medium
	Plantation forests, alien invasive trees.	Fires originating in the plantation forests and alien vegetation would spread onto stock farms once every 3 to 4 years.	Likely	Substantial loss of pasturage requiring purchase of fodder; stock losses.	Moderate	High
Plantation forests	Grassland (extreme conditions), plantation forests, alien invasive trees.	Given the protection afforded plantation forests, some extreme grassland fires are stopped but a major plantation fire is likely every 5 years.	Likely	On average 2 000ha burn per fire, resulting in about R4.5 million in direct losses; these severe fires also represent extreme danger for fire fighters.	Catastrophic	Extreme
	Grassland (average conditions).	Plantations burn only once in 20 years as a consequence of fires originating in grassland under average conditions.	Unlikely	Little or no loss of timber.	Insignificant	Low
132 KVA high voltage power line	Grassland (extreme and average conditions).	Smoke from annual fires that occur near the route of the power line will result in "phase-to-ground" flashovers or complete shortage.	Almost certain	Power dips as a consequence of flashovers result in significant losses to industries over a wide area. The additional risk of electrical shock during fire fighting increases the consequence rating.	Moderate	High
Recreational lodges	Grassland (extreme conditions), plantation forests, alien trees.	Lodges are well protected and generally removed from the path of the hazards.	Possible	Effective fire fighting programmes in place, so risk of property loss is reasonable; Risk of injury high.	Moderate	High
Properties of emergent farmers	Grassland (extreme conditions)	Homesteads and farms reasonably protected.	Possible	Risk of life and total loss of property is high.	Major	High



*An escaped controlled burn is a hazard to which power lines are exposed. The consequences are moderate*

**Table 9: List of environmental assets within the area of the Entabeni FPA with an analysis of the veldfire risk for each and the levels of risk assessed**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
Asset group	Hazard	Likelihood assessment	Likelihood rating	Consequence assessment	Consequence rating	Risk rating
Water catchments	Grassland (extreme & average conditions).	Potential arises every two years.	Almost certain	Grassland is adapted to annual fires and is likely to recover easily.	Minor	Medium
	Plantation forests, alien invasive trees.	Will occur every 1 in 5 years.	Likely	Consequences for the catchment are severe: loss of vegetation, soils sterilisation, and loss of catchment functioning. Recovery would take 40 years or more.	Major	Extreme
Wetlands	Grassland (extreme conditions).	Will occur every 2 years.	Almost certain	Many species are fire-adapted, but increased frequency will result in local degradation; fire exclusion results in fewer, more intense wildfires, resulting in peat fires with long-term damage.	Moderate	High
	Alien invasive species.	May occur occasionally in exceptional conditions.	Possible	High intensity fires will result in severe, local impacts, requiring several years to recover	Major	High
Specific fire vulnerable protected species: Wattle cranes	Grassland fires (extreme and average conditions).	Occur about every 2 years.	Almost certain	Fires threaten wetland breeding habitat and food source; smoke disrupting breeding behaviour, possibly resulting in temporary loss in species.	Major	Extreme
	Plantation forests and alien invasive trees.	The scattered patches of aliens may burn under exceptional conditions.	Unlikely	May result in disruption of breeding behaviour.	Moderate	Medium
Veerkomers vlei protected area	Grassland fires (extreme & average conditions).	Occur about every 2 years.	Almost certain	Little or no impact.	Insignificant	Medium
	Alien invasive trees.	Patches of alien invasive vegetation burn and cause significant damage every 5 to 10 years.	Possible	Localised burn hotspots (particularly in the wetlands) causing local extinction of species requiring several years to recover.	Major	High



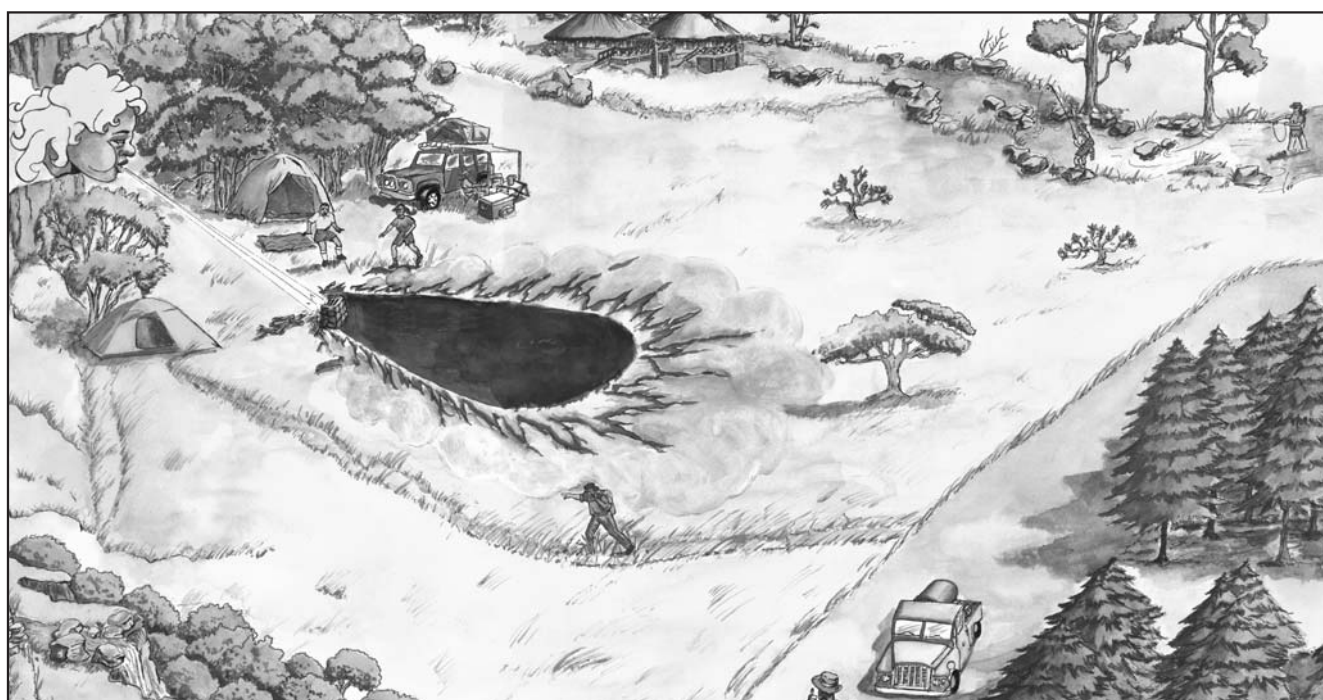
*A serious fire in a catchment can cause major damage*

## 6. List the risk management priorities

List the assets or assets groups in descending order of risk level, thus ranking their priorities.

Table 10: Assignment of risk management priorities

Risk class	Priority	Asset	Hazards
Extreme	1	Plantation forests	Grassland (extreme conditions), plantation forests, alien invasive trees.
		Water catchments	Plantation forests, alien invasive trees.
		Specific fire-vulnerable protected species: Wattled cranes	Grassland fires (average and extreme conditions).
High	2	Stock farms	Grassland (extreme conditions); plantation forests; alien invasive trees.
		132 KVS high voltage power line	Grassland (extreme and average conditions).
		Recreational lodges	Grassland extreme, plantation forest, alien trees.
		Emergent farmers	Grassland (extreme conditions).
		Tinginono settlement	Grassland (extreme conditions), plantation forests, alien invasive trees and the town
		Farmsteads and resorts	Grassland extreme, plantation forest, alien invasive trees.
		Wetlands	Grassland (extreme conditions) Alien invasive species.
Medium	3	Stock farms	Grassland (average conditions).
		Ruiterslaagte Town	Grassland (extreme conditions), plantation forests, alien invasive trees and the town
		Water Catchments	Grassland (extreme and average conditions).
		Specific fire-vulnerable protected species: Wattled Cranes	Plantation forests and alien invasive trees.
		Veerkomersvlei protected area	Grassland fires (extreme and average conditions).
Low	4	Plantation forests	Grassland (average conditions).
		Iron Age sites	Grassland extreme, plantation forest, alien trees.
		Indigenous forests	Grassland (extreme conditions).



Protection of plantation forests (bottom right) is one of the highest priorities in Entabeni FPA



# STEPS IN VELDFIRE RISK MANAGEMENT

## 1. Assess resources for veldfire management

### 1.1 Institutional capacity

Assess and describe the capacity within your FPA as a body. For example, does the FPA have a history of collaborating on fire issues? Are the majority of owners members of the FPA?

### 1.2 Personnel

Assess and describe the human resources available to the FPA, i.e. that would be at the disposal of the FPO under agreed circumstances. Indicate the numbers of people qualified for different fire-management jobs.

### 1.3 Equipment and facilities

List by means of standard categories the equipment and facilities that are available to the FPA.

### 1.4 Communications

Describe the means of communication available to members of the FPA.

### 1.5 Support from the umbrella FPA

If an umbrella serves the FPA, itemise the services it provides.

1.6 Assessment of the adequacy of resources and the need for improvement Identify the shortfalls in resources, and specify the targets for improvement during the five-year term of the business plan

## 2. Develop veldfire risk management strategies

Bearing in mind the resources available to the FPA proceed to develop your veldfire risk management strategies.

### 2.1 Veldfire risk management options

After you have drawn up your list of management priorities as in Table 10, assign medium risks to the routine management class, meaning that the risks will be managed by owners who will apply standard integrated veldfire management plans on their properties. Then assign risk management options to each asset in the high and extreme risk levels, according to the guideline in Table 12 (page 35). Table 11 (page 34) gives an example of how veldfire risk management options have been developed for extreme risk in the Entabeni FPA.



Personnel, equipment and facilities are important factors in veldfire risk management

**Table 11: Details of risk management strategies for extreme risks**

Asset	Hazard	Risk management options
Plantation forests	Grassland (extreme conditions), plantation forests, alien invasive trees.	<p><b>Avoid the risk:</b> Limit the establishment of plantations in areas which are at greater risk (steep, north-facing slopes).</p> <p><b>Reduce the hazards:</b> <i>Hazard reduction:</i> Encourage effective managed burns of the grassland abutting plantations and reduce or eliminate biomass of alien invasive trees. <i>Asset protection:</i> Improve the protection of the assets: create and maintain effective firebreaks, improve fire-fighting access in and around plantations, reduce biomass of alien invasive trees within forests.</p> <p><b>Reduce ignitions:</b> Maintain standard fire protection plans throughout all forest management units as part of integrated fire management plans; apply fire ban and fire restriction rules strictly; promote fuel management within plantations; monitor and manage activities around the forest during high-risk periods.</p> <p><b>Reduce consequence:</b> Ensure that effective veldfire fighting measures are in place in order to reduce risk of injury and loss of property.</p> <p><b>Manage residual risk:</b> Implement fire protection plans strictly; ensure FPA-level and umbrella-level fire suppression plans give priority to the plantation forest zone.</p> <p><b>Risk transfer:</b> Ensure adequate insurance.</p>
Water catchments	Plantation forests, alien invasive trees.	<p><b>Avoid the risk:</b> N/A</p> <p><b>Reduce the hazard likelihood:</b> <i>Hazard reduction:</i> Reduce biomass of alien invasive vegetation, reduction of small scale hazards (road verges, Spoornet property); <i>Asset Protection:</i> encourage the establishment of better protection measures e.g. well maintained firebreaks and ensuring that properties abutting plantation forests apply the same veldfire management standards. Develop awareness of communities' role in preventing fires from spreading into catchments.</p> <p><b>Reduce ignitions:</b> during high fire risk periods, ensure that activities in the area are carefully monitored e.g. hikers, fly-fishing enthusiasts, departments of roads and works and Spoornet work teams. Suspend prescribed burning activities during high-risk periods.</p> <p><b>Reduce consequence:</b> Develop community education programmes and public awareness of environmental values of catchments (increase awareness of the risk of fire). Ensure that veldfire fighting strategies are in place.</p> <p><b>Accept residual risk:</b> Develop co-operative management strategies for the region. Ensure that all landowners and stakeholders are aware of management standards. Develop and implement an education programme for residents within the catchment area, highlighting the importance of a healthy catchment, the effects of poor veldfire management and promoting awareness of the importance of an appropriate fire regime and health of the catchment system.</p>
Specific fire-vulnerable protected species: Wattle cranes	Grassland fires (average and extreme conditions).	<p><b>Avoid the risk:</b> N/A</p> <p><b>Reduce the hazard likelihood:</b> <i>Hazard reduction:</i> ensure that correct veldfire regimes are applied during managed burns. <i>Asset protection:</i> Promote implementation of community awareness of relationship between fire regime and threatened species survival requirements.</p> <p><b>Reduce ignitions:</b> Suspend fire-generating activities on days of high fire danger.</p> <p><b>Reduce consequence:</b> N/A</p> <p><b>Accept residual risk:</b> Develop co-operative detection and response networks and plans. Have fire suppression equipment on standby for rapid attack.</p>

Table 12. Veldfire risk management options\*

Management options	Descriptors
Avoid the risk	By deciding not to proceed with the activity likely to generate the veldfire risk. This option is relevant to future land use and development decisions. Examples of risk avoidance strategies include prohibiting certain types of development in areas prone to wildfires.
Reduce the hazard and the likelihood of exposure	Programmes to reduce the level of fuel available to burn in a veldfire and improvement of the degree to which assets are protected. Examples of hazard reduction strategies include prescribed burning, the preparation of firebreaks, or manual clearing of fire hazards as well as regular inspections. These measures would be incorporated in fire protection plans for each property or management unit. Preparedness.
Reduce ignitions	Programmes to reduce the number of deliberate and accidental ignitions of human origin. Examples of ignition reduction strategies include education and awareness programmes, total fire bans, reduction in activities during high-risk season or periods, arson investigation programmes, and issuing of permits to burn during the veldfire danger season. These measures are captured in fire prevention plans, which would also provide for education and enforcement.
Reduce consequences	This option includes various measures to reduce the consequence of wildfires, such as preparedness and contingency plans, wildfire recovery plans, community education programmes for self protection (lives and property), and building restrictions and standards for areas prone to veldfires.
Transfer the risk	Once risk has been mitigated to the desired extent, transfer risk through adequate insurance.
Accept residual risk	Veldfire risk management strategies are designed to reduce the level of risk, but will not eliminate the risk entirely. Some level of residual risk may remain, which will be managed with fire response strategies such as fire suppression operations, early fire detection, and evacuation as well as effective training programmes.

\* These are not necessarily mutually exclusive or appropriate in all circumstances.

## MANAGEMENT STRATEGIES

Cluster the options into general strategies, according to the next three headings.

### a. General strategies

For example:

- education and awareness programmes;
- use of prescribed burns; and
- improved veldfire management on non-members' properties by working with the local fire chief to implement the municipal by-laws.

### b. Integrated veldfire management plans

Each owner is obliged to manage veldfires on his or her own properties, integrating prescribed burning and fire protection plans. FPA members should agree on standards for integrated veldfire management plans, using examples of good practice for the area, and apply these to their land. Non-members should be encouraged to follow the same standards which could include:

- veldfire prevention plans;
- veldfire preparedness plans, including:
  - specifications for levels of preparedness for different fire danger ratings, including stand-by of aerial response resources;
- fire suppression plans, including:
  - definition of conditions determining levels of response under different fire danger ratings;
  - rules for escalating the incident command;

- recovery plans;
- compliance with Chapters 4 and 5 of the Act (firebreaks and preparedness for veldfires); and
- compliance with the rules of the FPA (for members)

### c. Specific asset protection strategies

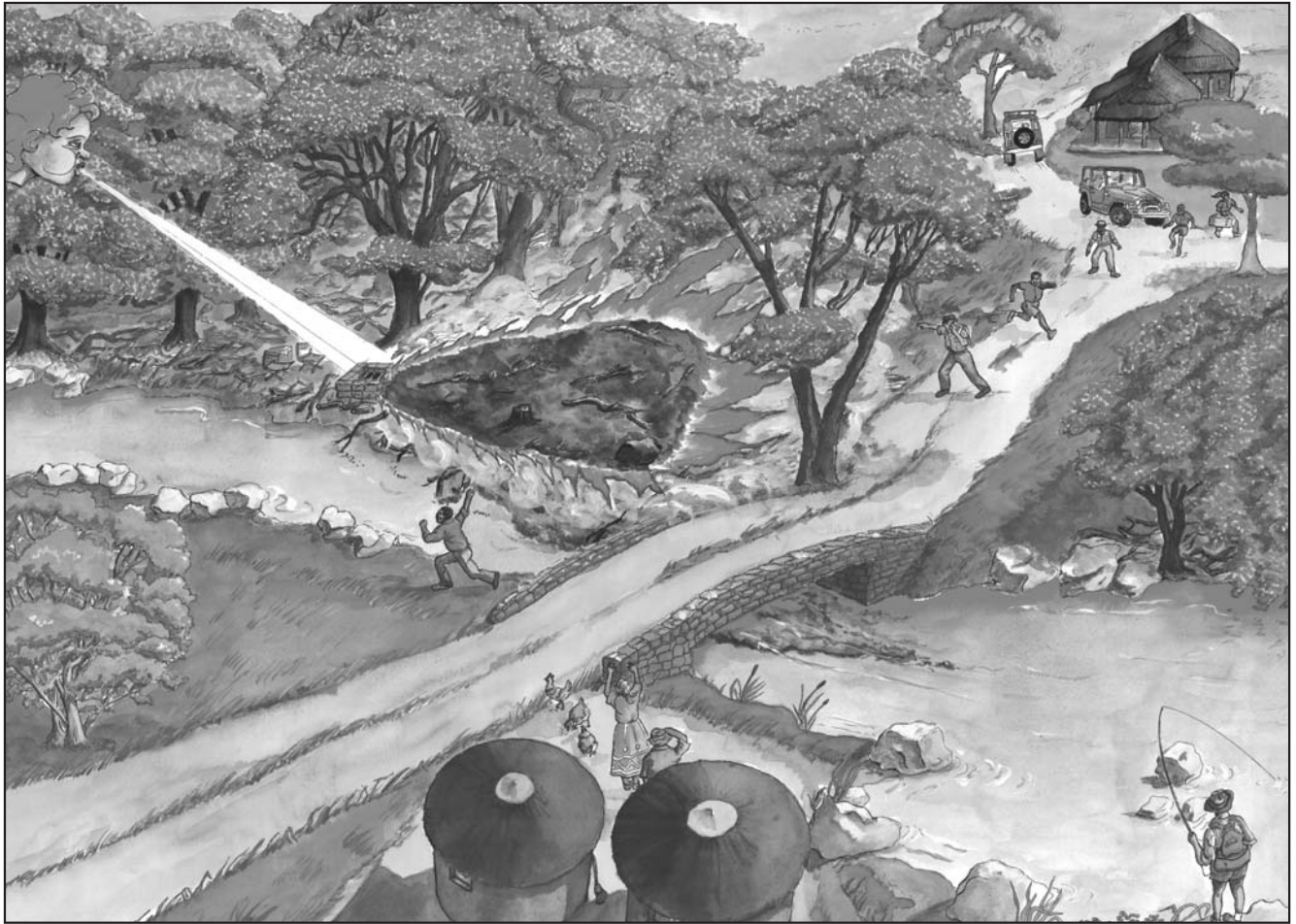
Identify any specific assets that need particular strategies to protect them, for example power lines, airports, plantation forests.

### 2.3 Develop rules for the FPA

The rules of the FPA are one of the mechanisms for implementing your chosen strategies and options. For example, if a strategy is that firebreaks should be placed in certain areas to minimise risk, your rule would set out the width of such breaks, who is exempt from preparing them, when they must be prepared by and how the soil and biodiversity should be protected when making them.

Other rules could concern:

- minimum fire fighting equipment requirements;
- minimum personnel requirements;
- mutual aid agreements with other FPAs or organisations;
- fire prohibition periods;
- prescribed burning; and
- catchment protection during prescribed burns.



Reducing the possibility of ignitions by banning fires on high-risk days is one management strategy for preventing veldfires. Picnickers should be made aware of the ban when it exists

## National office and regional offices of the Department of Water Affairs and Forestry

	<i>Address</i>	<i>Telephone</i>	<i>Fax</i>
National	Waterbron Building, 191 Schoeman St, Pretoria	012 336 6692	012 336 6660
Eastern Cape	2 Hargreaves Avenue, King Williamstown	043 604 5400	043 604 5587
Free State	2 <sup>nd</sup> floor, Sanlam Plaza Building, cnr East Burger and Maitland St, Bloemfontein	051 430 3134	051 430 8146
Gauteng	15 <sup>th</sup> floor, Sanlam Plaza East Building, 285 Schoeman St, Pretoria	012 392 1300	012 382 1304
KwaZulu-Natal	185 Longmarket St, Pietermaritzburg	033 342 8101	033 394 1849
Limpopo	Magistrates Building, Magistrates St, Makhado	015 516 0201	015 516 1062
Mpumalanga	5 <sup>th</sup> floor Prorom Building, cnr Brown and Paul Kruger St, Nelspruit	013 759 7300 013 759 7385	013 755 4003
North West	1 <sup>st</sup> floor Motsoedi House, Dr James Moroka Dr, Mmabatho	018 384 3270 018 381 3480	018 381 7407
Northern Cape	Corner Knight and Stead St, Kimberley	053 831 4125	053 831 5682
Southern Cape	Demar Centre, Main Street, Knysna	044 382 5466	044 382 5461
Western Cape	17 Strand St, De Goede Hoop Park, Bellville	021 950 7100	021 946 3664

# VELDFIRE RISK MANAGEMENT

## What is meant by veldfire risk management?

Veldfire risk is defined as the chance of a veldfire igniting, spreading and causing damage to assets of economical, social and environmental value to the community.

Veldfire risk management involves identifying the level of risk posed by veldfires to assets, and establishing strategies to protect these assets from the adverse effects of veldfires. The purpose of veldfire risk management is to protect the community and its values, which could be social, economic or environmental, from the adverse affects of veldfire. The risk management strategies must be appropriate to the level of risk determined within an FPA, and must match the options available for managing the risk. The outcome sought is to achieve better integration of community preparedness, prevention, suppression and recovery strategies as key elements of veldfire management.

The principle of achieving the lowest acceptable risk at an affordable cost must apply, i.e. that once the FPA has implemented its strategy, the cost of implementation as well as the level of residual risk is acceptable to the members of the FPA and the public agencies supporting the FPA.

In order for there to be a risk there must be some asset that is exposed to a hazard. For a given likelihood:

- there is no risk if there is no consequence;
- there is a very high risk if the consequence is very great.

For a given magnitude of consequence:

- there is low risk if the likelihood of the hazard eventuating is small, i.e. the event is very unlikely;
- there is a high risk if the likelihood of the hazard eventuating is big, i.e. the event is frequent.

Risk management is the logical and systematic method of:

- establishing the strategic context to veldfire risk management within the area of the FPA, i.e. the understood social, economic, environmental and

institutional context that determines the level of risk faced by the community, the options available to them to manage that risk and the criteria that members will apply when deciding on priorities;

- identifying the veldfire hazards that they face;
- identifying the assets exposed to the hazards;
- identifying, analysing, evaluating, treating, monitoring and communicating risks so that members and the FPA can minimise losses and maximise opportunities.

Risk management must involve effective communication and consultation. This is because the risk management strategy must stand up to the scrutiny of the courts, i.e. shown to be diligent, to be reasonable, and to meet established standards.

Veldfire management requires management now, with the best means available. This means we cannot wait for improvements, but rather that we must improve management continuously, in a systematic way. This continuous improvement is achieved by monitoring, evaluation and improvement.



*Preparing firebreaks reduces veldfire risk*

## More information

For more information on veldfire risk management, please ask your local Fire Adviser for a copy of the guideline produced by DWAF.

# SUMMARY OF INFORMATION REQUIRED FOR A BUSINESS PLAN

A guide to drawing up a business plan and how to assess veldfire risk, as well as a model business plan are available from any office of DWAF. The business plan must include the elements specified below.

1. A summary of its contents.
2. The scope of the business plan in terms of its area and period of operation.
3. A description of the current situation in the area of the FPA that provides the strategic context to the business plan of the FPA including:
  - background and history of the FPA;
  - social considerations informing the business plan;
  - economic considerations informing the business plan;
  - environmental considerations informing the business plan;
  - a description of veldfires in the area of the FPA;
  - laws applying to veldfires in the area of the FPA;
  - current veldfire management;
  - assessment of the effects of past veldfires in terms of social, economic and environmental impacts;
4. The veldfire management strategy of the FPA under the following headings:
  - criteria to be applied in evaluating veldfire risk within the area of the FPA.
  - aim and objectives of the strategy;
  - an identification of the veldfire hazards in the area of the FPA;
  - an identification of the social, economic and environmental assets exposed to veldfire hazards in the area of the FPA;
  - an identification of the veldfire risks within the area of the FPA;
  - resources available for veldfire management in the area of the FPA including institutional capacity, personnel, equipment and facilities, communications, support from an umbrella FPA, if one exists, and assessment of the adequacy of resources and the need for improvement;
  - veldfire risk management strategies for the risks identified in the area of the FPA under the following headings: general strategies, integrated veldfire management plans, and specific asset protection strategies.



*A veldfire management strategy must identify resources available for veldfire management such as aerial support (Picture courtesy of Ukuvuku Project)*

# DEVELOPING YOUR FPA'S VELD FIRE RISK ANALYSIS AND MANAGEMENT PLAN

The case study of the Entabeni Fire Protection Association will be used to show the steps in the veldfire risk analysis and management required in part 4 of an FPA business plan. The full case study is available from your regional Fire Advisor.



*The town of Ruiterslaagte (right) and the township of Tingonono (upper left)*

## Summary of Entabeni FPA

The area of the Entabeni Fire Protection Association falls within the Pitso Meetse Local Municipality. It amounts to about 210 000 hectares. The association includes 140 of the approximately 700 owners in the area. The land area under control of these owners is 70 000 hectares or about 33% of the total area of the FPA.

This business plan will apply for five years from 1 April 2003 to 31 March 2008. The Entabeni area has a population of about 13 300. The town of Ruiterslaagte has about 3 300 people living there permanently,

including 3 000 in the township of Tingonono. About 10 000 live on farms or other rural properties and of these about 8 500 are employees and their families. Entabeni is primarily a rural economy, with industrial plantation forests, stock farms, ecotourism, sawmilling and local furniture and craft factories being the most important contributors.

The Pitso Meetse IDP identifies veldfires as an environmental risk in the municipality. Veldfires occur mostly during winter. The highest fire danger is during the passage of cold fronts, which cause strong westerly

winds and very low atmospheric humidity. Recent veldfires have caused significant damage in loss of life and injury, and loss of timber, grazing, and structures. Disruptions to operations at Inhlanzi airport and interruptions of power line operations are also significant losses.

The social assets exposed to high risk of loss from wildfires in Entabeni are the Tinginono Settlement, Ruiterslaagte town, some iron age settlement sites and farmsteads and ecotourism resorts. Economic assets exposed to extreme or high risk of loss are plantation forests, stock farms, the 132 KVA high voltage power line that runs through the area, recreational lodges and the properties of emergent farmers. Environmental assets exposed to extreme or

high risk of loss are the water catchments, wattled cranes, a fire vulnerable protected species, and wetlands and the Veerkombersvlei protected area. These risks arise mainly from the fires that arise in grasslands, plantation forests and alien invasive trees during cold front weather, as well as fires that are ignited within the Tinginono settlement and Ruiterslaagte town.

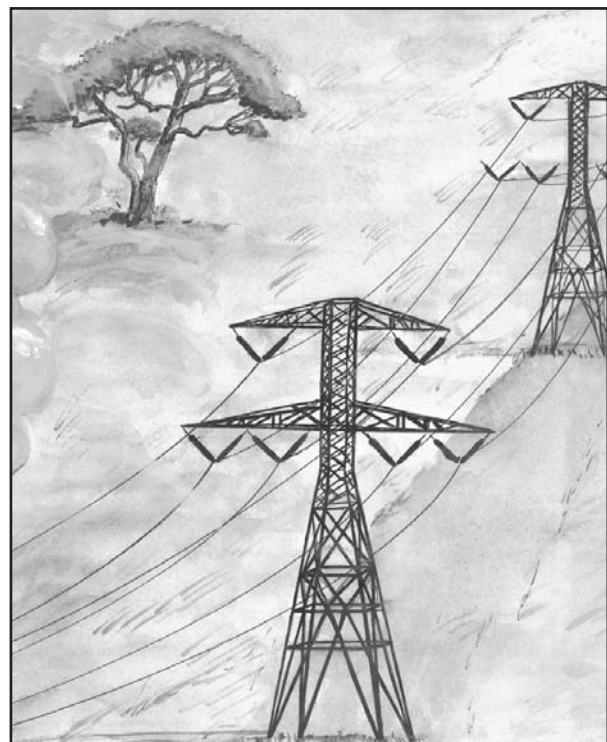
The FPA aims to contribute to community development by eliminating loss of life and human injury in veldfires and by progressively reducing impacts on property and environmental values while promoting the useful role of veldfires. The FPA aims to have its veldfire management strategy deployed throughout its area during this first five-year period.



*Plantation forests are economic assets exposed to extreme fire risks*



*Ecotourism is a major economic asset and is based on important environmental values - wetlands and protected areas*



*ESKOM's 132 KVA high voltage power line runs through the area*



# STEPS IN VELDFIRE RISK ANALYSIS

The example below shows how the elements of a risk management analysis are systematically entered into a table:

- Asset identification (column 1)
- Hazard identification (column 2)
- Likelihood assessment (column 3)
- Likelihood rating (column 4)
- Consequence assessment (column 5)
- Consequence rating (column 6)
- Risk rating (column 7)

This enables the FPA to rationally determine what its risk management priorities should be.

## 1. Establish your strategic context

This is an analysis of your current situation regarding veldfire management within the area of the FPA. See the points under 3 in the summary of a business plan (page 21). It is important to conclude with a list of the criteria to be used in risk assessment, as agreed during consultation. These will guide you to determine risk management priorities. Members of the Entabeni FPA have agreed on the criteria set out in Table 1, in order of importance.

Table 1: Criteria to evaluate veldfire risks, judge their acceptability and assign priorities

- Threat to lives: no death from veldfire is acceptable;
- Threat of injury to people;
- Loss of livelihoods;
- Loss of shelter;
- Financial loss and loss of economic activity;
- Loss of catchment values;
- Loss of natural species or habitats; and
- Spread of alien invasive plants.

These criteria have been applied in Table 10 on page 32.

## 2. Identify hazards

On the basis of the known history of veldfires, their origins and causes, identify, list and describe the hazards in your area in general as in Table 2. These hazards must (a) be those that expose assets to fire risk and (b) become targets for management.

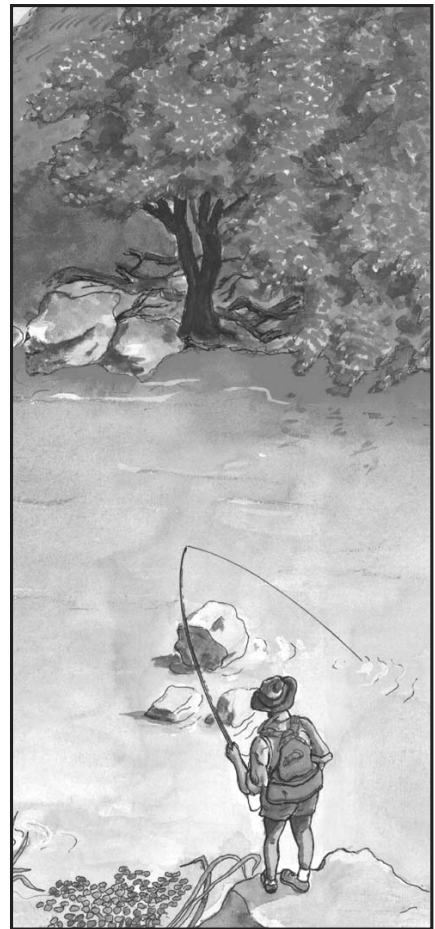
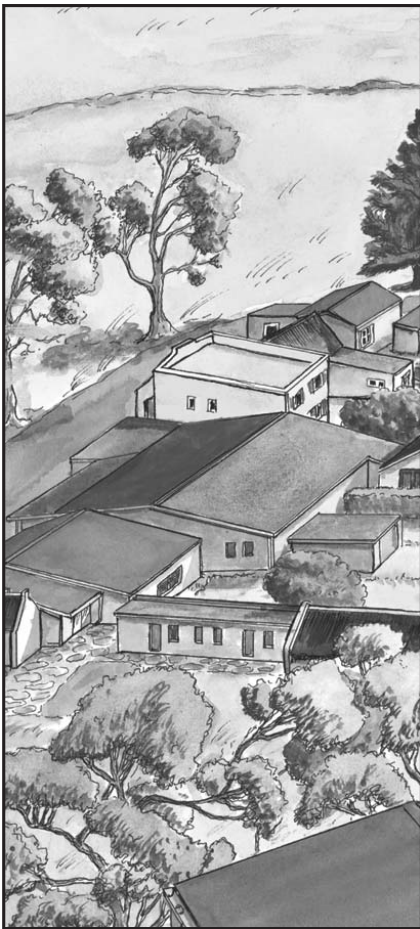
Table 2: Summary of veldfire hazards identified in the area of the Entabeni FPA (one hazard example)

Hazard	Description
Grassland fires: Extreme conditions	In extreme conditions, i.e. during frontal weather, veldfires are likely to burn areas that are not earmarked for managed burns. Also, fauna are likely to suffer significantly given the rate and intensity of burns.
Grassland fires: Average conditions	The greatest negative impact would be aseasonal (affects floral and fauna composition) and unwanted burns (destruction of grazing).
Plantation forests	The high intensity fires in plantation forests result in the complete removal of aboveground vegetation and sterilising of soils.
Alien invasive trees	As for plantations, although more patchy in distribution.
Ruiterslaagte town	The abundance of flammable fuels (wooden houses, thatch roofs, garden rubbish, fuel depots etc.) makes the town a hazard to itself.
Tinginono settlement	The Tinginono settlement is a hazard to itself, especially because of crowded housing and poor access together with widespread use of coal stoves and naked flames for cooking and heating; under current conditions is also a hazard to the surrounding veld.

### 3. Identify and describe assets: Column 1

For each of the three categories below, list the important assets that are exposed to risk, and enter these into Column 1 of the tables as in Tables 7, 8 and 9 below:

1. Social assets - page 29
2. Economic assets - page 30
3. Environmental assets - page 31



The town of Ruiterslaagte is an example of a social asset

Farms are an example of an economic asset

Water catchments are an example of an environmental asset

### 4. Identify which hazards each asset is exposed to: Column 2

For each asset in each table, identify which of the hazards in Table 2 it is exposed to. Enter these into column 2 of the tables as in Tables 7, 8 and 9 below. Each asset can be exposed to more than one risk.

Examples of assets and hazards

COLUMN 1	COLUMN 2
Asset group	Hazard
Social asset: Ruiterslaagte town	Grassland fires (extreme conditions)
Economic asset: Farms	Fires coming from plantation forests
Environmental asset: Water catchments	Fires in grasslands and plantations

## 5. Identify, describe and rate veldfire risks within the FPA area: Columns 3 to 7

The objective in this section is to rate and describe the veldfire risks in such a way that risk management options can be objectively assigned to the risks and drawn together in overall veldfire management strategy.

**Step 5.1:** Assess and describe the likelihood that an asset or an asset group will be subject to a wildfire originating from a given hazard, as in the third column of Tables 7 to 9. Your description will help you to choose an appropriate rating in Step 5.2. Enter this into Column 3.

**Step 5.2:** Assign a rating to the likelihood, using Table 3 as a guide. Enter this into Column 4.

**Table 3:** Qualitative and quantitative indicators of likelihood i.e. likelihood of hazard affecting the assets:

Likelihood rating:	Likelihood: indicative frequency	Description
Almost certain	1 in 2 years	Is expected to occur
Likely	1 in 5 years	Will probably occur
Possible	1 in 10 years	Might occur at some time
Unlikely	1 in 20 years	Could occur at some time
Rare	1 in 100 years	May only occur in exceptional circumstances

In making your assessment, assume that any asset is protected to the level usually achieved in your area with your stakeholders on a likelihood rating scale.

### Examples of likelihood assessments and ratings

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4
Asset group	Hazard	Likelihood assessment	Likelihood rating
Social asset: Ruiterslaagte town	Grassland fires (extreme conditions)	The town is reasonably well protected, with effective management plans in place. This reduces the likelihood of impacts on the town. Chance of it happening: once every 20 years.	Unlikely
Economic asset: Farms	Grassland fires (average conditions)	Most farms have fire protection plans, but every year small fires burn on many farms.	Almost certain
Environmental asset: Water catchments	Fires from plantations	Will occur every 1 in 5 years, when plantations catch fire under extreme weather conditions.	Likely

**Step 5.3:** assess and describe the consequence to the asset should the fire event associated with the hazard come to occur; assume the scenario that you need to plan for; this might be the average impact of a wildfire typically associated with the hazard, or it might be the worst historical case. The description will help you to assign a rating in Step 5.4. Enter it into Column 5.

**Step 5.4:** assign a rating to the consequence, using Table 4 below as a guide. Enter it into Column 6.

**Table 4: Qualitative measures of consequence**

Level of consequence	Life vulnerability criteria	Economic vulnerability criteria	Environmental and ecological vulnerability criteria
1 Catastrophic	Death	Depressed economy of the FPA. Extensive and widespread loss of assets. Major impact across a large part of the community and region. Long-term external assistance required to recover.	Permanent loss of species or habitats within the area or of water catchment values.
2 Major	Extensive injuries, evacuation required.	Serious financial loss, affecting a significant portion of the community. Requires external funding (e.g. from Disaster Management funds) to recover.	Habitat destruction, temporary loss of species, or temporary loss of catchment values, requiring several years to recover.
3 Moderate	Medical treatment required.	Localised damage to property. Short-term external assistance required to recover.	Serious impact on the environment that will take a few years to recover.
4 Minor	Minor injuries only – first aid treatment required.	Minor financial loss. Short-term damage to individual assets. No external assistance required to recover.	Discernable environmental impact. Assets recover rapidly.
5 Insignificant	No injuries	Inconsequential or no damage to property	Minor impact on the environment

**Examples of consequences assessment and rating**

COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6
Asset group	Hazard	Likelihood assessment	Likelihood rating	Consequence assessment	Consequence rating
Social asset: Ruiterslaagte town	Grassland fires (extreme conditions)	The town is reasonably well protected, with effective management plans in place. This reduces the likelihood of impacts on the town. Chance of it happening: once every 20 years.	Unlikely	Loss of property is significant; moderate risk of injury during fire fighting.	Moderate
Economic asset: Farms	Grassland fires (average conditions)	Most farms have fire protection plans, but every year small fires burn on many farms.	Almost certain	No significant losses	Insignificant
Environmental asset: Water catchments	Fires from plantations	Will occur every 1 in 5 years, when plantations catch fire under extreme weather conditions.	Likely	Consequences for the catchment are severe: loss of vegetation, soil sterilisation and loss of catchment functioning. Recovery would take 40 plus years.	Major