

MANAGEMENT OF VELD FIRES BY NEWLY SETTLED FARMERS AND RELATED SMALL-SCALE BUSINESS OPPORTUNITIES.

C. VD WESTHUIZEN

ABSTRACT

The central regions of South Africa experienced an abnormally high precipitation during the first quarter of 2009, thus resulting in an unusually high probability of veld fires due to the excessive amounts of fuel/grass available. In South Africa the process of land redistribution was recently drastically accelerated. This implies that many newly settled black farmers are farming but still need to be trained in various aspects of farm management. Unfortunately, in most cases this training did not include environmental management, which among others, implies managing and preparing for veld fires. The Department of Water Affairs and Forestry also does not have sufficient funding to cover all these aspects and a regional collaborative plan must therefore be developed. In addition to this, in an attempt to alleviate poverty, many other previously disadvantaged people in South Africa must be assisted in establishing small business enterprises. This paper will highlight a process to be followed to train and coordinate all farmers and simultaneously establish business opportunities that will remove some of the fuel (grasses and shrubs) in order to reduce the risk and intensity of winter and spring veld fires.

Keywords: veld fires; newly settled farmers; small-scale business opportunities

1. INTRODUCTION

The National Veld and Forest Fire Act (No.101 of 1998) were introduced to prevent and combat veld, forest and mountain fires throughout the country and thereby limit and reduce the damage and losses caused by fires to life, fixed property, infrastructure, movable property, stock, crops, fauna and flora and veld in South Africa. In terms of the Constitution, fire-fighting services are a Local Government function, with Provincial and National Governments playing a facilitating role. The Minister of Water Affairs and Forestry must prepare and maintain a fire danger rating system for the country, in consultation with affected role players, including Fire Protection Associations, which are to be established under the Act. The Department of Water Affairs and Forestry (DWAF) must also keep a record of fires and develop a database to capture the statistics of fires and their impact on society. This act was amended by Act no. 12 of 2001.

2. RESULTS

2.1 Efforts of the Department of Water Affairs and Forestry

Protection of life and property is a basic human need and the Department has been moving ahead with the implementation of the National Veld and Forest Fire Act, 1998 (Act 101 of 1998, as amended), to bring into force the National Fire Danger Rating system that was launched in 2005. This system will enable local government, Fire Protection Associations and Disaster Management Committees to act in an informed manner in planning and dealing with fires. According to the Department of Water Affairs and Forestry's Five Year Strategic Plan 2006/07 - 2010/11 (South Africa, 2006a) and the department's annual report (South Africa, 2006b), good progress were made.

The Working on Fire programme is run in partnership with the Department of Provincial and Local Government, and is partly funded by DWAF. The vision for Working on Fire is to protect life, livelihoods, ecosystem services and natural processes through integrated fire management in order to contribute to economic empowerment, skills development, social equity and accelerated service delivery. During 2005/06 Working on Fire was involved in the suppression of 805 fires, covering 356,789 ha. The programme did a further 230 controlled burns, covering 24,497ha. Working on Fire created 277,791 person days of employment with 1,037 people benefiting directly from it. The programme was further successful in changing firefighting from being a 100% male-dominated function to having 27% of female workers. The programme spent R36.36 million on ground operations. The Department of Provincial & Local Government, the programme's partner department on aerial support, spent a further R10.888 million. Thus equates to an investment of R45562 per beneficiary.

Due to the high incidents of fires during the extreme weather conditions of 2008, it was a priority for the Department to ensure that the registration of Fire Protection Associations (FPA) took place. Currently 59 FPA's are registered. The Department has advised and assisted 36 of these FPA's with the compilation of business plans included in which were the principles of risk assessment. The effectiveness in combating fires depends largely on the resources that are available to the FPA and this will have to be addressed to ensure more effectiveness. The Department plans to review the performance of the FPA's on a regular basis. In addition there have been ongoing awareness campaigns relating to the National Veld and Forest Fire Act to role players. The National Fire Danger Rating System (NFDRS), an early warning system for veld fires, was also introduced.

2.2 Performance and training needs of newly established farmers

In a study to determine the performance of newly settled farmers, the respondents were also requested to indicate what training they have received. None of the respondents indicated that they have received any training in fire management or prevention.

3. RECOMMENDATIONS

A project namely "Linking fuels (grass & bush) management with economic development" was identified. This was necessary because the central regions of South Africa experienced an abnormally high precipitation during the first quarter of 2009, in most cases more rain were measured than the average annual rainfall. All farmers must unite in preparing for the unusually high probability of veld fires due to the excessive amounts of fuel/grass available.

After the democratic election of 1994 a new policy was developed that ensures that agricultural land in South Africa is evenly distributed to all the inhabitants of the country. In this regard land must be transferred to black people, who in most cases are not trained for the management of a farm. With increased political pressure on policy makers to perform, this process of land redistribution was drastically accelerated during the past few years. This implies that many newly settled black farmers are farming but still need to be trained in various aspects of farm management. Unfortunately, in most cases this lack of training also includes environmental management, which among others, implies managing and preparing for veld fires. The Department of Water Affairs and Forestry does not have sufficient funding to cover all these aspects and a regional collaborative plan must therefore be developed. There's no way that the Department of Water Affairs and Forestry can clear enough bush to remove the threat.

In addition to this, in an attempt to alleviate poverty, many other previously disadvantaged people in South Africa must be assisted in establishing small business enterprises. The mission of this project is to alleviate unemployment and underemployment while protecting the quality of life in the region. However, before government is willing to invest in a project, the requirements are that the projects must (1) create enough revenue, and (2) sustain revenue over time.

The overhead objective of this project proposal is the management of fuel (grasses, trees and bushes) next to roads in a district via utilization of these fuels by previously disadvantaged inhabitants in various ways/projects in order to reduce the risk and intensity of winter and spring veld fires.

The following products/outcomes should be reached:

- ☐ Cutting of grasses, trees and shrubs on the shoulder line of the national road(s) in the municipal area as part of revenue projects for previously disadvantaged people, especially woman;
- ☐ Purchasing of equipment like fire block machines and charcoal making equipment for PDI's to start a small business. The following uses for the excess fuel are:
 - o Biomass is the production of electricity/heat through cogeneration (firewood & fire blocks of grasses)
 - o Use of bio digesters by microbes for methanol gas production,
 - o composting,
 - o mulching, and
 - o small tree uses in lumber post and polls.
- ☐ Making of fire breaks either side of the main national roads within the boundaries of the Municipal region ($\pm 120\text{km}$);
- ☐ Making of fire breaks around all townships in the region;
- ☐ Farmer training / awareness (e.g. training in the making of fire breaks also with animals);
- ☐ Community (school) training / awareness (e.g. kids not to play with fire);
- ☐ Assist farmers to obtain fire-fighting equipment (especially newly settled farmers);
- ☐ Boards/signs next to roads (especially national roads) to warn public not to start fires (e.g. cigarette management).

The Black Economic Empowerment (BEE) small businesses will be owned and managed by local people from the previously disadvantaged community. It is not expected that the beneficiaries contribute assets to the project. All inputs into the project will therefore be funded from other (outside) sources. All fire fighting equipment should become the property of the participating farmers. A consultant or government office is expected to assist in the training of these new entrepreneurs.

The investment needed should be approximately R1.866m. Details are the following:

- 50 x fire fighting equipment @ R17000 = R850,000
- 30 x grass and bush cutting equipment @ R1200 = R36,000
- 3 beneficiaries receiving burn block manufacturing and packaging equipment = R50,000
- 3 beneficiaries receiving charcoal manufacturing and packaging equipment = R70,000

- 3 beneficiaries receiving assistance in the transport of beneficiaries = R180,000
- Training and awareness of farmers and schools: R70,000
- Making of fire strips next to N1: R300,000
- Making of fire strips next to towns: R100,000
- Signposts next to roads: R50,000
- Business plans for manufacturers: R20,000
- Coordination of project by agent: R120,000
- Total: R1,846,000.

The number of beneficiaries involved in such a project will typically be as follow:

- 50 farmers receiving fire fighting equipment
- 30 beneficiaries receiving grass and bush cutting equipment
- 3 beneficiaries receiving burn block manufacturing and packaging equipment
- 3 beneficiaries receiving charcoal manufacturing and packaging equipment
- 3 beneficiaries receiving assistance in the transport of beneficiaries

Thus a total of 89 beneficiaries will be involved, resulting in an R20741.57 investment per beneficiary.

The following services should be provided by the service provider (and in agreement with the District/Local Municipality and the beneficiaries):

- Identification of beneficiaries and training workshops with beneficiaries;
- Compiling of detailed business plans;
- Interaction with suppliers and distribution of fire fighting equipment;
- Interaction with suppliers and distribution of grass and bush cutting equipment;
- Theoretical and practical training;
- Coordination and implementation of fire breaks next to national roads in the Municipal area;
- Coordination and implementation of fire breaks next to towns in the Municipal area;
- Monthly reports;
- Assistance (after care) in the management of the project for three months or for the period as requested by the beneficiaries/funding agencies.

The implementation schedule should be the following:

Preliminary phase (1 st phase)	2 weeks
Business plans phase (2 nd phase)	1 week

Implementation phase (3 rd phase)	2 months
After care (4 th phase)	3 months

4. SUMMARY AND CONCLUSIONS

Much more research is needed in the following fields:

- The prevention and combating of veld fires;
- The use of controlled fire in sustainable forest management;
- Conducting of biomass utilization studies to investigate: (1) the resource (especially ways to make lead contaminated organic material safe for human and animal use/consumption), (2) potential value added ways of using the material, and (3) ways to encourage the investment of private enterprise in the region that will ultimately lead to jobs and higher-end job creation.

Furthermore it is obvious that enough is not being done by the Department of Water Affairs and Forestry to combat the fire hazard problems in the country. At a relative low investment per beneficiary, agents (service providers) could also be used to coordinate projects where PDI's could be assisted to obtain and manage small businesses, thus improving their livelihoods and simultaneously reducing the available fuel near major roads the main source of veld fires in the region.

5. LITERATURE SOURCES

South Africa, 1998. Act no. 101 of 1998: National Veld and Forest Fire Act, 1998. Government Gazette, Vol. 401, 27 November 1998, No. 19515 Government Printer: Pretoria, South Africa

South Africa, 2001. Act no. 12 of 2001: National Forest and Fire Laws Amendment Act. Government Gazette, Vol. 433, 18 July 2001, No. 22479. Government Printer: Pretoria, South Africa

South Africa, 2006a. Department of Water Affairs and Forestry: Five Year Strategic Plan 2006/07 -2010/11. Directorate: Corporate Planning, Government Printer: Pretoria, South Africa.

South Africa, 2006b. Report of the Department of Water Affairs and Forestry: 1 April 2005 to 31 March 2006. RP Number: 166/2006, ISBN Number: 0-621-36773-7. Government Printer: Pretoria, South Africa