

***UNITED NATIONS REGIONAL WORKSHOP ON USE OF SPACE  
TECHNOLOGY FOR DISASTER MANAGEMENT FOR AFRICA:***

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***Southern Africa Fire Network of the Global  
Observation of Forestry Cover***

**Developing Capacity for Operational Fire  
Monitoring and Management Systems in  
Southern Africa.**

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Rural communities have to deal with the risk  
of fire every year.

**Uncontrolled fires are a danger to human  
& livestock lives, shelter, infrastructure &  
natural resources.**

## **Fire destroys resources needed for immediate use over the dry season**

- Thatching grass, Pasture, wildlife habitat, medicinal plants are lost.
- Frequent, hot fires may have long-term effect on the reproductive capacity of important veld products
- Wildfires in Southern Africa contribute a significant proportion of green house gases to the atmosphere

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## However, fire is used as a management tool in various land use activities:

- *Fire is used in hunting, pasture management crop production activities e.t.c.*
- Most outbreaks of wildfires result from these land use activities.
- It is partly for this reason that fire suppression policies have not been successful in controlling fire

- A large section of the population of Southern Africa depend directly on natural resources
  - A variable semi-arid climate & intensive land use pressure result in high uncertainty in availability of natural resources
  - Frequent veld fires increases further the uncertainty in the supply of natural resources.
  - IPCC assessments project future increase in climate variability & an increased risk of frequent hot fires over Southern Africa.
- \*\*Currently used fire management approaches are ineffective, costly and spatially limited.**

# Effective fire monitoring and management systems need to be developed in Southern Africa

- Incorporating space technology in operational fire control schemes will improve significantly fire monitoring and & ultimately its management
- **The Southern Africa Fire Network (SAFNet) formed 3 years ago aims to Develop Capacity for Operational Fire Monitoring and Management Systems in Southern Africa.**
- The focus in SAFNet is developing capacity in the use of space technology for fire monitoring and management

- Improvements have been made on the provision of satellite data to different parts of the world including Africa.

- The cost of data has also been reduced

## **From satellite data, for instance:**

- The risk of fire occurrence can be determined in advance
- Identify and track a burning fire
- Determine the area burnt
- Assess the recovery rate of burnt areas e.t.c.

**\*\*GIS** provides the ability to integrate fire information with - for instance, land use data

**There is need to develop capacity, to access, interpret, evaluate & use products of space technology in fire management:**

- SAFNet is linked to international networks:
  - *Miombo Network*
  - *Global Observation of Forestry Cover*
    - This facilitates links to data providers & experts in the use of geo-spatial information technology in fire studies
- \*\*SAFNet is involved in evaluating the new MODIS fire products**

## **Examples of SAFNet fire activities**

**Botswana:** *Focus on working with Government fire control schemes & Environmental NGOs*

- Projects in the Okavango Delta
- Eastern Botswana - linked to IPCC Climate Change project

**Namibia:** National Parks & communal land uses

**Malawi:** Forestry Reserve

**Zimbabwe:** Forest, Wildlife Park, Commercial Farms and Communal Land uses

**Mozambique:** Forest Reserve

**South Africa:** National Parks & communal land uses - Trans-boundary wildlife management

## *SAFNet Third Meeting – University of Botswana 29<sup>th</sup> July –1<sup>st</sup> August 2002*

- Focus on linking with NGOs – develop capacity on use of satellite data at community level
- Link to policy makers
- Hands on training on latest satellite based fire assessment methods
- Report on ongoing projects
- Ways to attract funding

# SAFNet has no funding:

- So far the University of Botswana provides limited infrastructure resources to keep the network running
- Through GOFC & the University of Maryland limited funding from NASA supports the ongoing MODIS validation work
- The System for Analysis Research & Training (START) have provided support for SAFNet meetings.