



**SAFNET**  
Southern African Fire Network



Fire IT Meeting 29 - 31 July 2014  
Philip Frost



# Overview- Southern Africa

- Upcoming Kruger (SAFNET) field campaign
- New MODIS Reception Station, Kenya
- AFIS Android App launched
- FireHawk camera validation
- New AFIS features and developments

# SAFNET Field Campaign

*Validation of satellite active fire data sets using coincident prescribed fire opportunities in Kruger National Park*

*Date: 24<sup>th</sup> – 28<sup>th</sup> August 2014*

The objective of this campaign is the following:

- 1) Validation of new remote sensing products (active detection),
- 2) Improving gas emission estimates and fuel characterization from savannah fires,
- 3) capacity building and knowledge and skills transfer between regional and international experts

# Participants



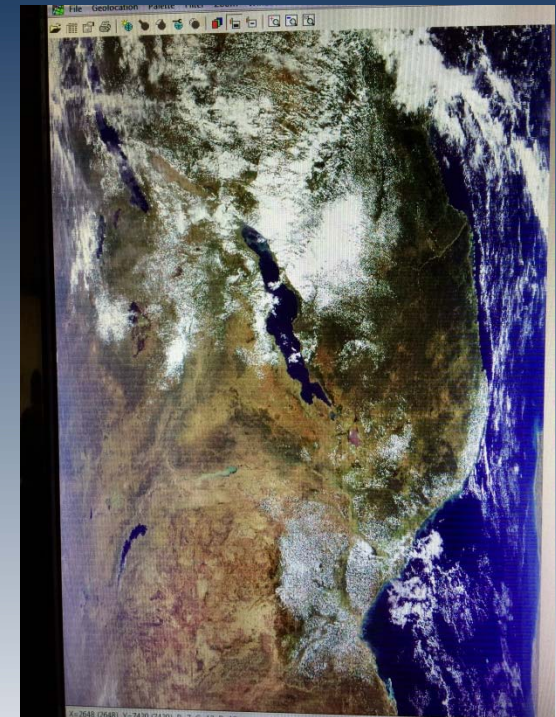
## Regional participants

No	Name	email	Country/Network	Organisation/Institution
2	Isabel Schmidt	<a href="mailto:isabelbschmidt@gmail.com">isabelbschmidt@gmail.com</a>	Brazil	University of Brazil
3	Lufuno Vhengani	<a href="mailto:LVhengani@csir.co.za">LVhengani@csir.co.za</a>	South Africa	Meraka Institute, Remote Sensing unit
4	Azwitamisi Mudau	<a href="mailto:AMudau@csir.co.za">AMudau@csir.co.za</a>	South Africa	CSIR
5	Riaan van den Dool	<a href="mailto:rvddool@csir.co.za">rvddool@csir.co.za</a>	South Africa	Meraka Institute, Remote Sensing unit
6	Aliko Munyenembe	<a href="mailto:almunye@gmail.com">almunye@gmail.com</a>	Malawi	Department of Forestry
7	John Isaac Molefe	<a href="mailto:MOLEFEJI@mopipi.ub.bw/Molefeji@gmail.com">MOLEFEJI@mopipi.ub.bw/Molefeji@gmail.com</a>	Botswana	University of Botswana
8	Natasha Ribereo	<a href="mailto:joluci2000@yahoo.com">joluci2000@yahoo.com</a>	Mozambique	EMU/ Miombo Network
9	Gift Sikaundi	<a href="mailto:giftsikaundi@yahoo.com">giftsikaundi@yahoo.com</a> ; <a href="mailto:gift@necz.org.zm">gift@necz.org.zm</a>	Zambia	Environmental Council of Zambia
10	Ntando Nondo	<a href="mailto:ntando_nondo@yahoo.co.uk">ntando_nondo@yahoo.co.uk</a>	Zimbabwe	Environmental Management Agency
11	Philipo Malley	<a href="mailto:pmalley@mwekawildlife.org">pmalley@mwekawildlife.org</a>	Tanzania	AMESD
12	Robin Beatty	<a href="mailto:robin.beatty@gmail.com">robin.beatty@gmail.com</a>	Mozambique	321 Fire

# MODIS/VIIRS reception - Kenya



- Installed at RCMRD in Nairobi, Kenya
- Orbital Systems X band system

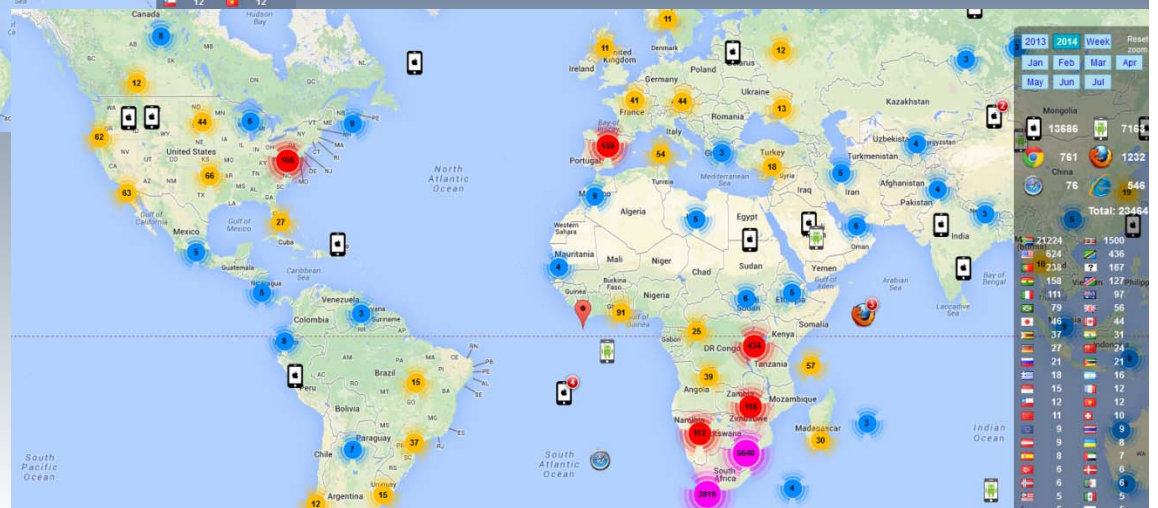


# AFIS Mobile App - Android



AFIS Mobile App launched on the Google Play store – 2014

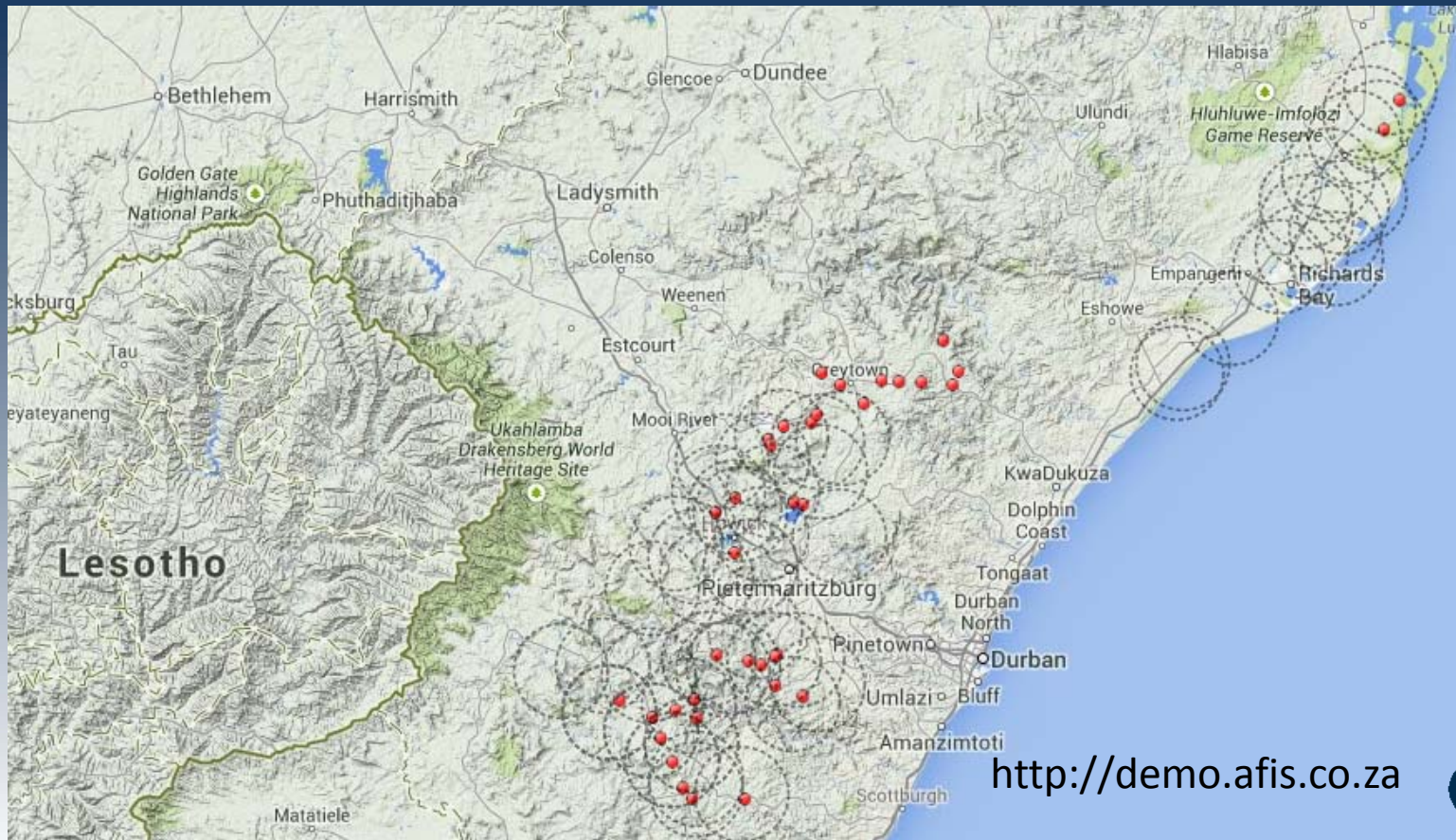
Over 2500 users between iOS and Android app globally



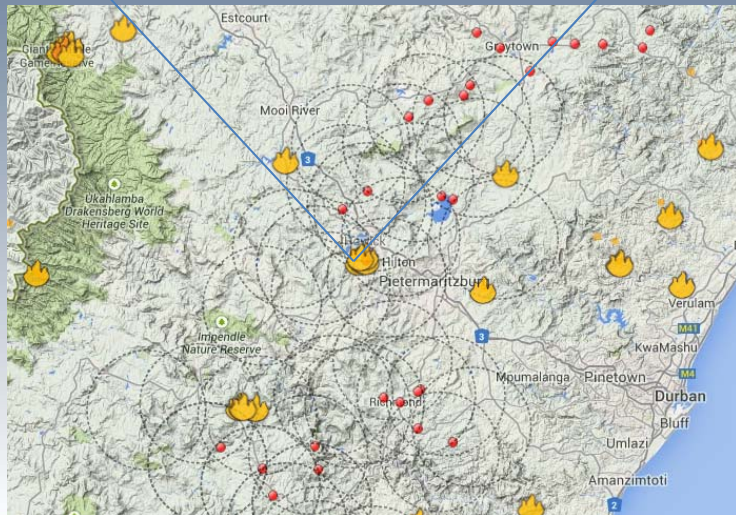
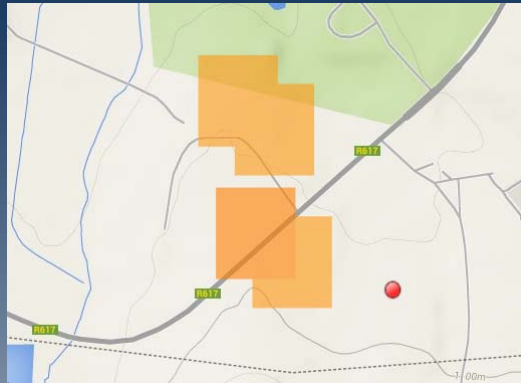
## New Features:

- Spanish and Portuguese translations
- User information uploads

# FireHawk Camera network



# VIIRS validation with FireHawk cameras



Log Id : 3307  
Alarm : 69400  
Date : 29/07/2014  
Time : 12:25:52

[ [View Full Alarm Information](#) ]

Swat80p [ 13 ]  
2014-07-29 12:22:38 Image 1/4(o)



# Current AFIS Services



# AFIS Dashboard

### Active Fires

Location name	Max FRP (mw)	Area (ha)	First Seen	Current FDI	Max FDI
Mandeni Ward 2 #726	-1	78.06	Wed Jul 23 2014 11:31	53	53
North Coast Toll Road #161	-1	78.05	Wed Jul 23 2014 11:31	46	49
uMngeni Ward 4 #921	-1	77.95	Wed Jul 23 2014 11:31	36	41
Ndwedwe Ward 3 #916	-1	78.03	Wed Jul 23 2014 11:31	41	46
Kwa Sani Ward 1 #417	-1	122.40	Wed Jul 23 2014 11:31	35	44
Chota Motala Road #506	-1	121.09	Wed Jul 23 2014 11:31	41	51
Maseru #417	-1	78.08	Wed Jul 23 2014 11:31	38	42
Impendle Ward 4 #082	-1	77.94	Wed Jul 23 2014 11:31	39	47
Ingwe Ward 8 #842	-1	162.00	Wed Jul 23 2014 11:31	37	43

### My FDI locations

- My House: 56
- Your House: 53
 

Today	Tomorrow	Sat	Sun	Mon
FDI 53	55	46	37	34
- Their House: 49
 

Today	Tomorrow	Sat	Sun	Mon	
FDI 49	59	48	43	38	
Humidity	28	12	45	29	33
Rainfall	0	0	0	0	0
Temp	23	27	19	18	19
Windspeed	4	8	17	7	1

### Real Time Weather

Eskom Benburg CWCS187 (24756 m)

Temperature: 23.8  
 Wind Speed: 15.4  
 Wind Direction: 284  
 Rain (mm): 0  
 Humidity %: 14  
 FDI: 57  
 Local Time: 22:00

### Weather

Tomorrow

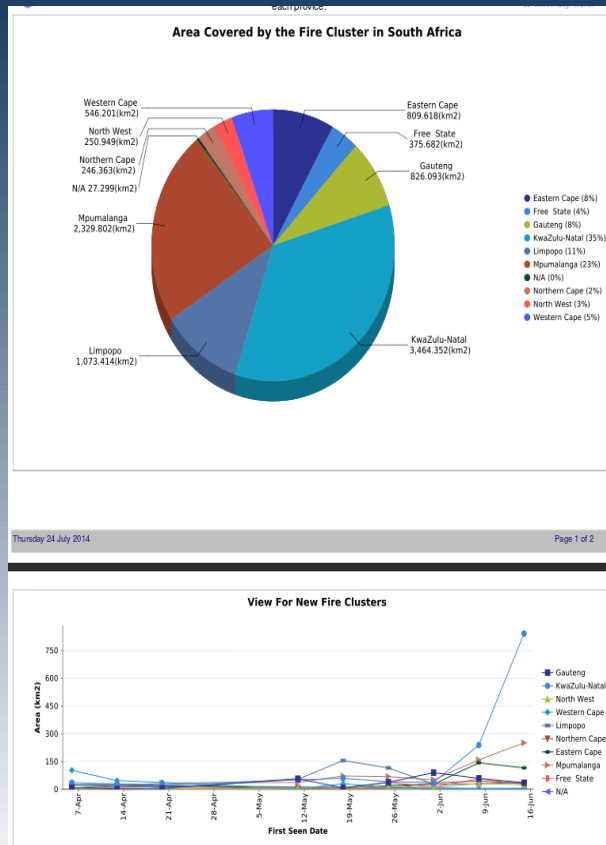
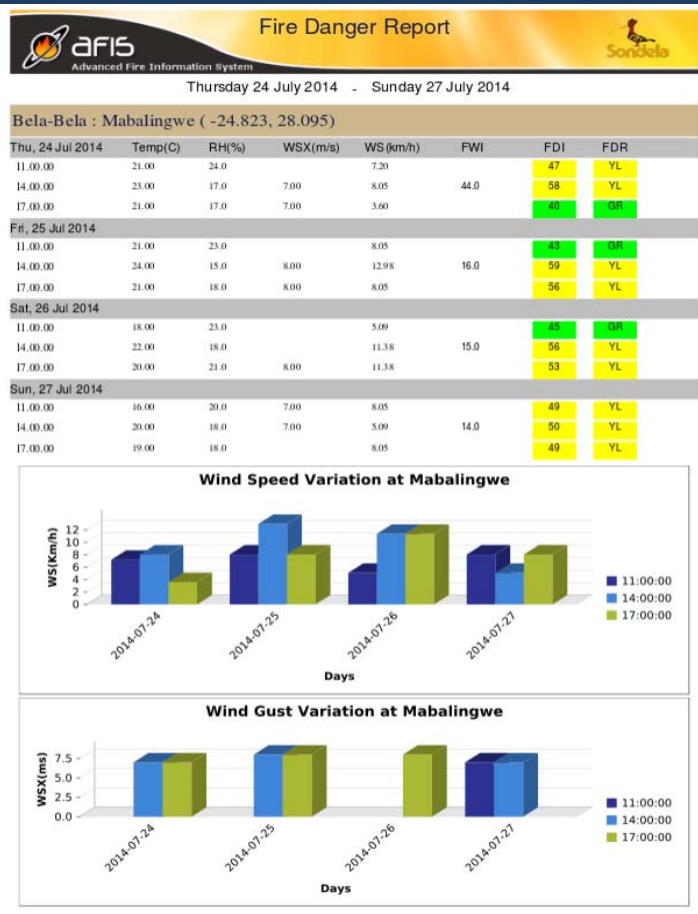
61  
20 °C  
19 km/h  
0 mm  
13 %

Tomorrow: 20 °C  
 Saturday: 19 °C  
 Sunday: 17 °C  
 Monday: 16 °C

# Dashboard - Reporting

The dashboard interface includes a left sidebar with navigation options: Dashboard, Settings, and Reports. The main content area is titled 'Dashboard Reports' and features a calendar for July 2014. A 'Request report' button is positioned above the calendar. The calendar grid shows dates from 1 to 31, with the 24th highlighted in yellow. To the right of the calendar, there are two panels: 'Requested reports' and 'Monthly reports'. Each panel contains a list of reports with status indicators (active, sum, pending) and a 'Piet se plaas' logo. The 'Requested reports' panel shows three reports: one active (blue), two summaries (green), and one pending (red). The 'Monthly reports' panel shows a similar list of reports.

# AFIS Reporting engine



**Reports List:**  
AFIS Fire Clusters  
FDI Forecast  
BA Statistics

**Technology:**  
Jasper Reports  
Server/Library  
Jasper Studio (report designer)  
REST API  
SOAP API  
Postgresql

# Future Developments

- Operational Landsat 8 burned area product generation
- Collaboration with Landgate Aurora for operational fire spread modelling of Southern Africa
- Integration of Kenya and possible Ghana MODIS/VIIRS DR stations for Sub-Saharan African wide AFIS
- Next SAFNET meeting planned for 2015