

New Product considerations for integrated SWFDP and SARFFG

Eugene Poolman

Chief Forecasting: Disaster Risk Reduction

South African Weather Service

RSMC Pretoria

QUICK MAPS

FCAST-PRES-20141021-001.1

General Forecasting Interface

Ref: Fcast_weblinks 1.9

Developer & Comments:
[Eugene Poolman](#)
 x6001)

Forecasting Web D E

[SAWS Main](#) | [WMO](#) | [Fires AFIS](#) | [Google](#) | NEW! SAFFG Overview, MSG Cloud Type and Cloud Top Temp images

NOWCASTING

Observations

- [SYNOP \(ECMWF\)](#)
- [TFI \(UnivWyo\)](#)
- [Webcams on airports](#)
- [Lightning \(5 min Total\)](#)
- [Lightning \(5 min Pos\)](#)
- [Lightning 1hour Totals](#)
- [Lightning Threat Index](#)
- [Hail\(hma\)\(NW,MP,Lim\)](#)
- [Hail\(hma\)\(EC,FS,KZN\)](#)
- [Hail\(hma\)\(Gauteng\)](#)
- [Particle ID\(Bethlehem\)](#)

MSG

- [CII](#)
- [RDI](#)
- [CRR](#)
- [HE/UM Combined rain](#)
- [Cloud Top Temps](#)
- [Cloud Type](#)
- [Eumetsat Images](#)

RADAR

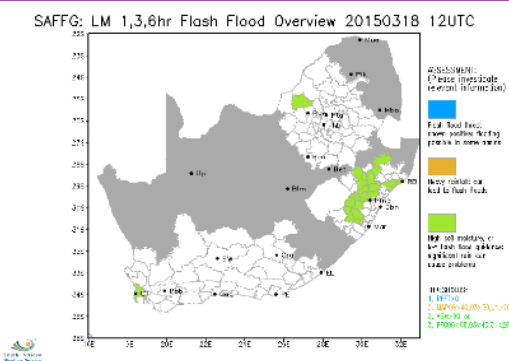
- [SA Storms](#)
- [Bethlehem](#)
- [Bloemfontein](#)
- [Cape Town](#)
- [De Aar](#)
- [Durban](#)
- [East London](#)
- [Ermelo](#)
- [Irene](#)
- [Mthatha](#)
- [Ottsodal](#)
- [Polokwane](#)
- [Port Elizabeth](#)
- [Skukuza](#)

FORECASTING

TIGGE EPS

- [Spaghetti, EPS Mean](#)
- [Extreme Rn,Wnd,Imp](#)
- [Extreme Weather](#)

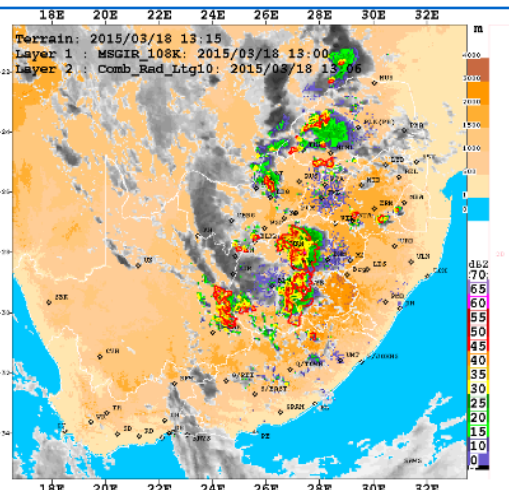
SAFFG: LM 1,3,6hr Flash Flood Overview 20150318 12UTC

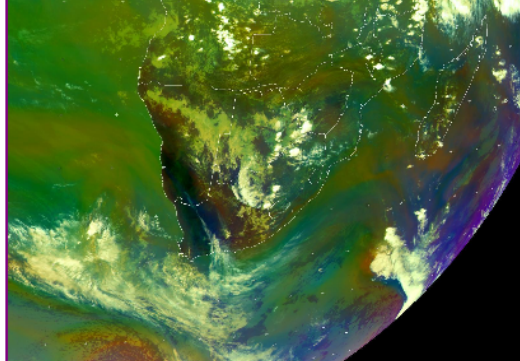


FLASH FLOOD

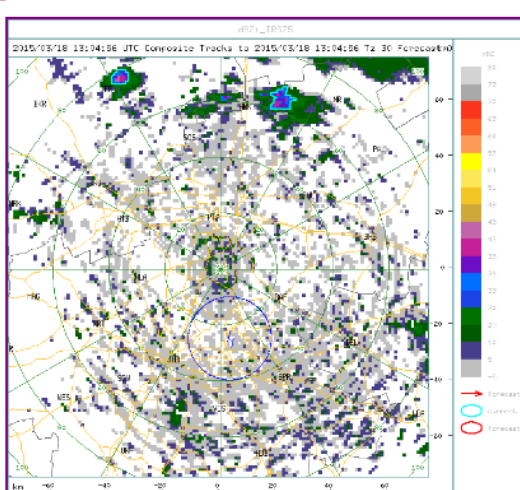
18E 20E 22E 24E 26E 28E 30E 32E

Terrain: 2015/03/18 13:15
 Layer 1 : MSGIR_108K: 2015/03/18 13:00
 Layer 2 : Comb_Rad_Ltg10: 2015/03/18 13:06



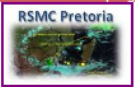


2015/03/18 13:04:26 UTC Convexio Tracks to 2015/03/18 13:04:26 To 30 Forecast



RSMC PRETORIA

RSMC Pretoria Webpage




SWFDP Products


- [SWFDP Guidance Maps](#)
- [SWFDP Archive](#)
- [RSMC La Reunion](#)
- UN for SA: SWFDP_EN
- PWD: MTO-EN!

FLASH FLOOD WARNINGS

SAFFG Forecaster Interface



SARFFG



UN: southafrica
 PWD: sarffg:9313

FcastInfo

- [ARS Graphs](#)
- [SA Mosaic 1hr rain](#)
- [Bethlehem 1hr rain](#)
- [Bloemfontein 1hr rain](#)
- [Cape Town 1hr rain](#)
- [Durban 1hr rain](#)
- [De Aar 1hr rain](#)
- [East London 1hr rain](#)
- [Ermelo 1hr rain](#)
- [Irene 1hr rain](#)
- [Mthatha 1hr rain](#)
- [Ottsodal 1hr rain](#)

Quick Maps Dashboard

Ref: SWWSweb 1.0

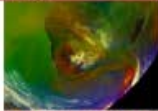
Developer & Comments:
[Eugene Poolman](#) (x6001)



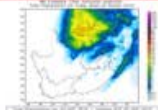
[SAWS Main](#) |
 [WMO](#) |
 [Fires AFIS](#) |
 [Google](#) |
 NEW! Under Construction

RELATED INFO

MSG Airmass



SREPS 24 hour Ave Rain



FLASH FLOODING

FFGS Forecaster Interfaces



UN: southafrica PWD:
sarffg:9313



SARFFG Products (SADC)

[FFG LM Summary](#)
[FFT LM Summary](#)

[Impact: SA West](#)
[Impact: SA Central](#)
[Impact: SA East](#)

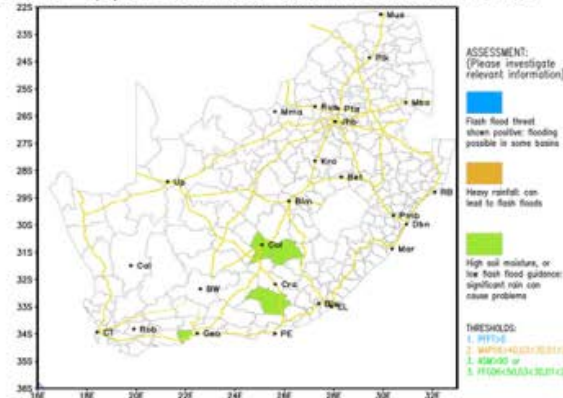
SAFFG Products (SA)

[FFGorams \(Timeseries\)](#)
[FFG LM Summary](#)
[FFT LM Summary](#)

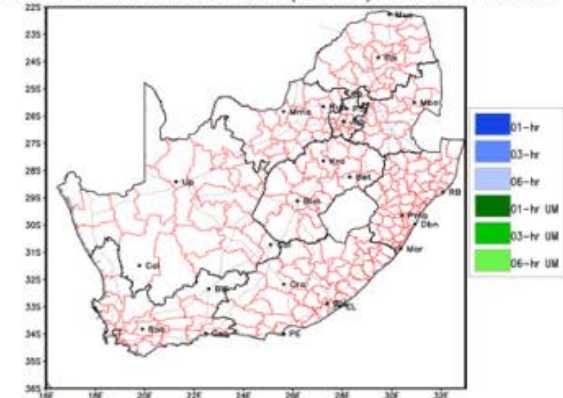
[Impact: Western Cape](#)
[Impact: Eastern Cape](#)
[Impact: KZN](#)

mailto:eugene.poolman@weathersa.co.za

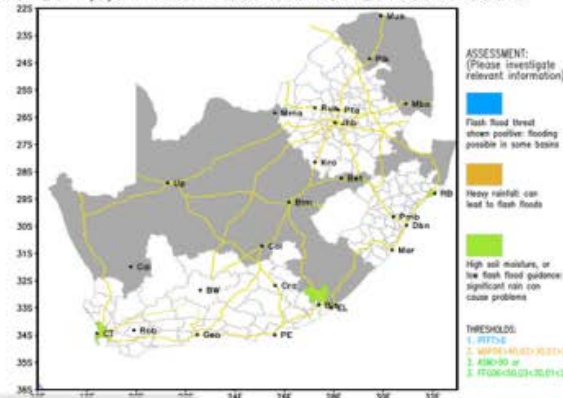
SARFFG: LM 1,3,6hr Flash Flood Overview 20150904 09UTC



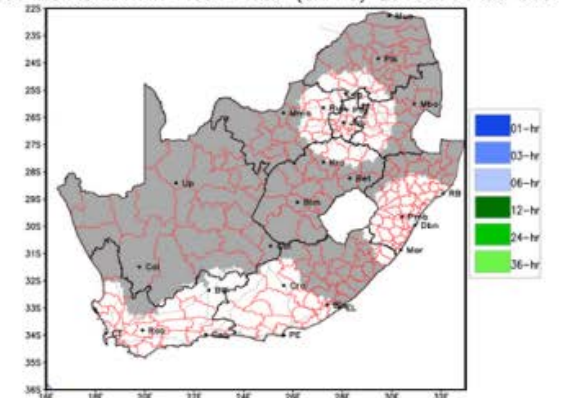
Impact Risk Overview: Flash Flood (SARFFG) 20150904 09 UTC



SAFFG: LM 1,3,6hr Flash Flood Overview 20150904 09UTC

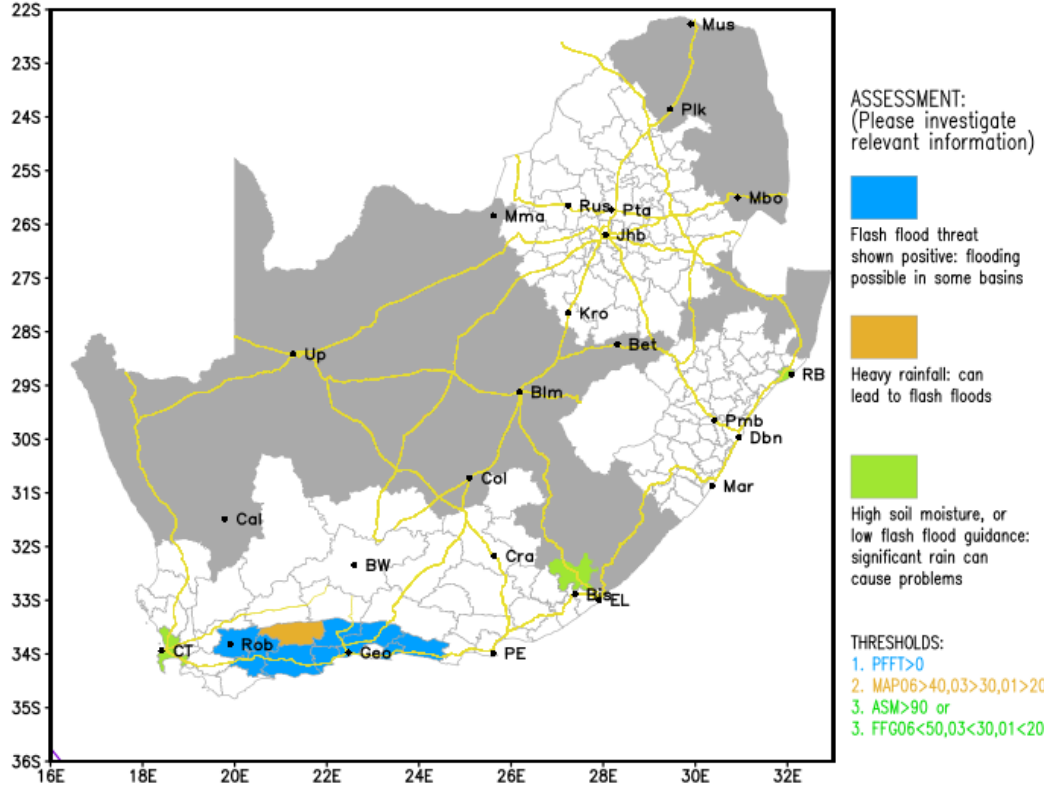


Impact Risk Overview: Flash Flood (SAFFG) 20150904 09 UTC

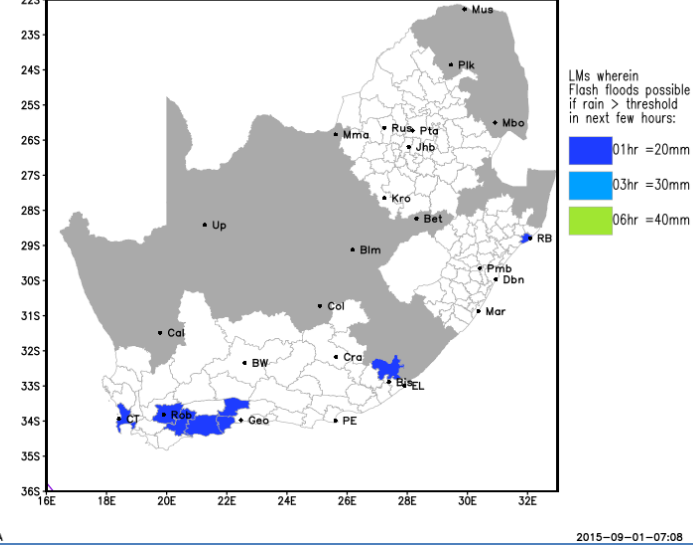


“Heads up” products for forecasters and disaster managers

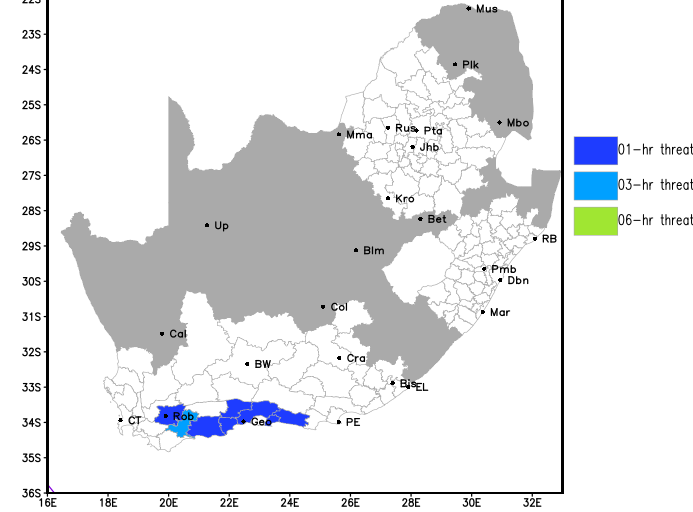
SAFFG: LM 1,3,6hr Flash Flood Overview 20150901 01UTC



SAFFG Local Municipalities: FFG Summary 20150901 01UTC



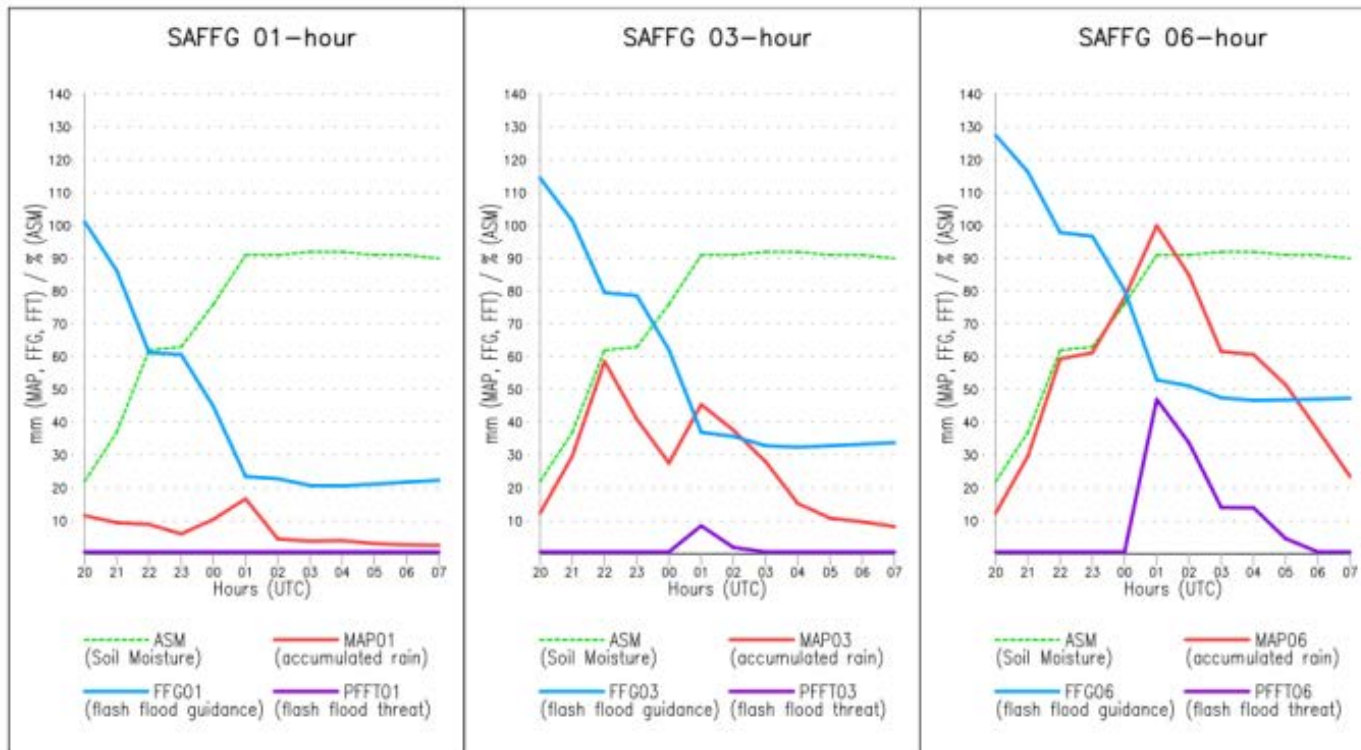
Local Municipalities FFT Summary for 20150901 01:00 UTC



Impact Information



SAFFG FFGgram (Time Series)
 Location: Grootbrakrivier (basin 2002001116)
 Date: 20150901 07h UTC





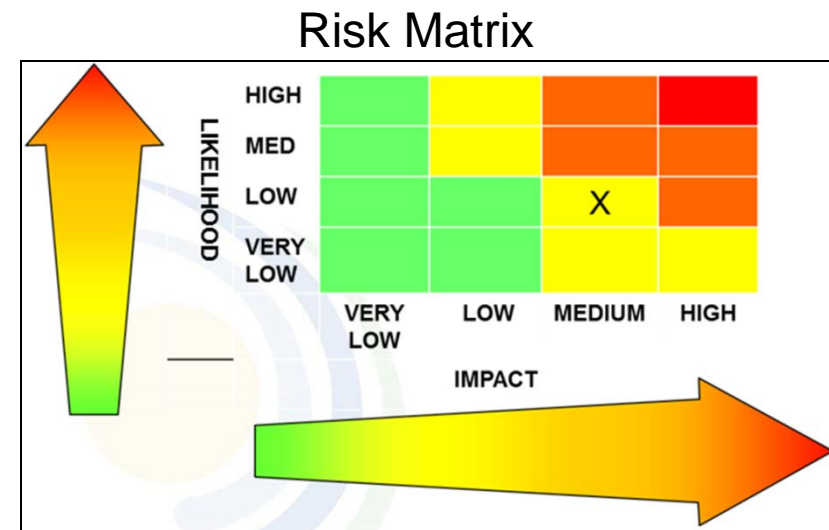
IMPACT-BASED FORECASTING SUPPORT PRODUCTS

FCAST-PRES-20141021-001.1

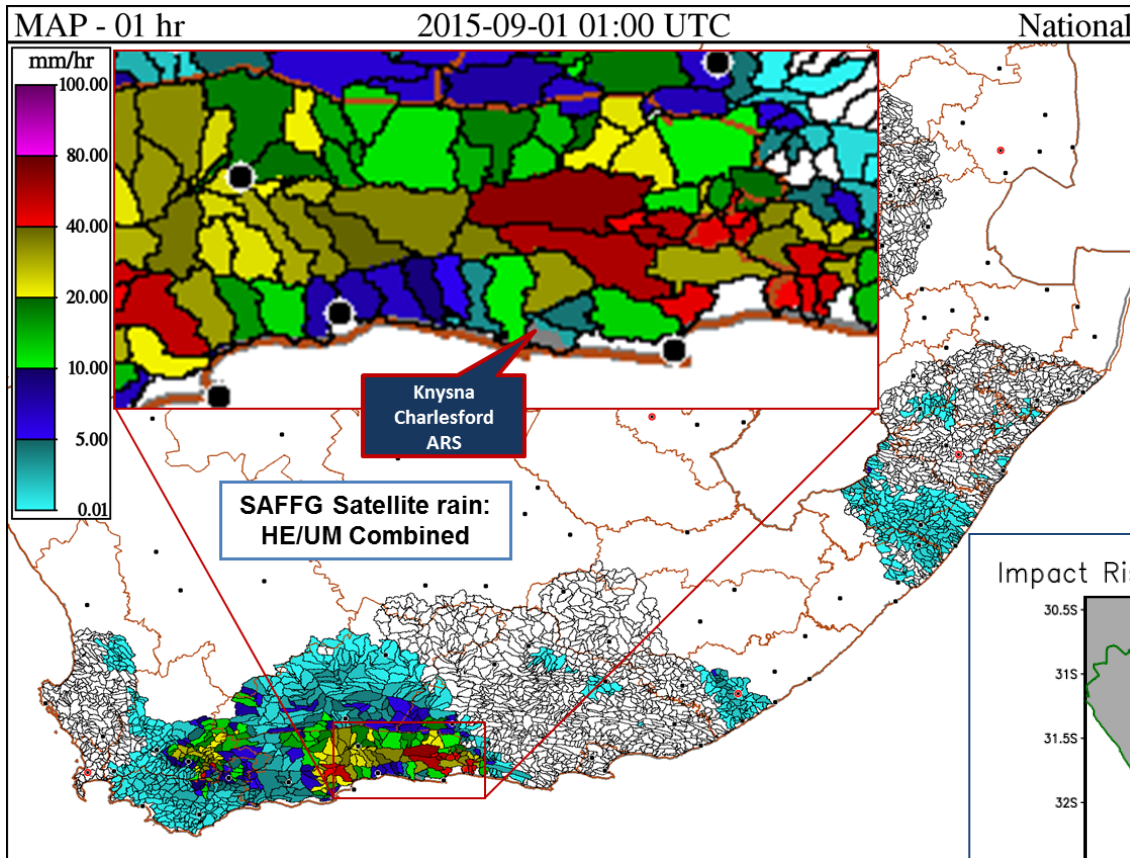
Warning decision making process

- WMO initiative pilot in Mozambique, Myanmar
- Impact Risk Level warning based on a Risk Matrix
- Likelihood: *weather forecasting issue*
 - Based on weather forecasting systems (numerical models, radar, satellite, observations, etc.)
- Potential Impact: *disaster risk issue*
 - Determined by disaster managers and stakeholders based on vulnerability information at local levels
- Combination provide *Risk Level* in 4 colours

	No severe weather
	Be aware
	Be prepared
	Take action

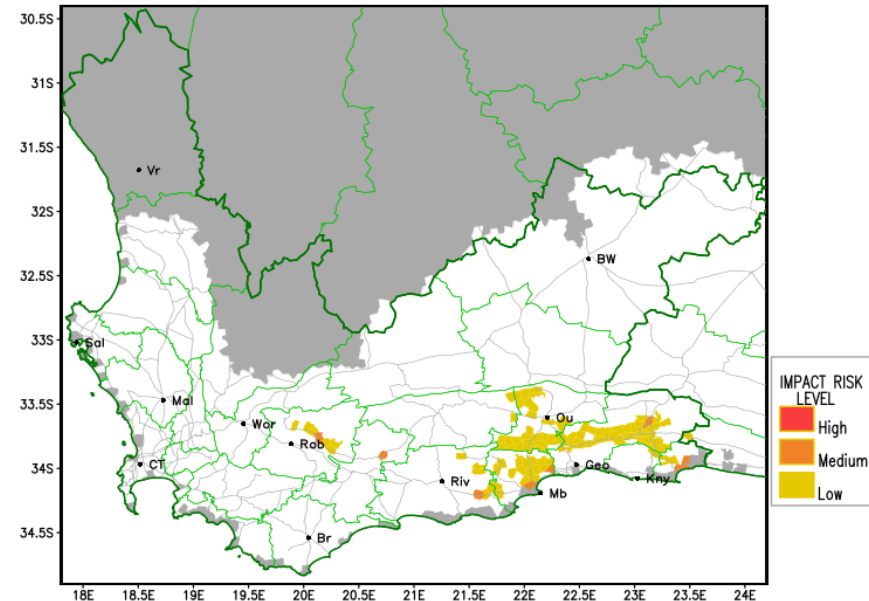


Impact-based Forecasting Info



- 1 Sept 2015, Cape South Coast, Cut-off Low
- Various roads and bridges closed between Mossel Bay and Plettenberg Bay

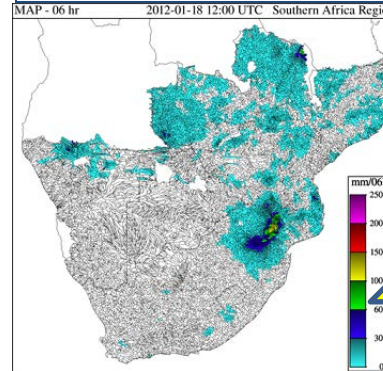
Impact Risk Level: Flash Flood (06hr SAFFG) 20150901 02 UTC



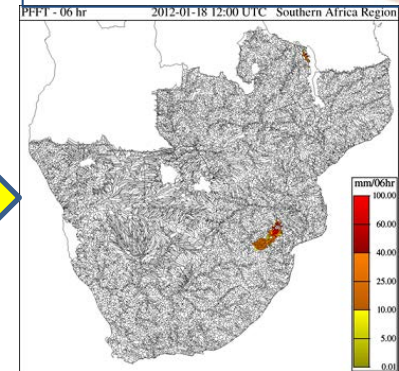
ENHANCING USE OF RAINFALL MAPS FROM SWFDP INTO SARFFG

FCAST-PRES-20141021-001.1

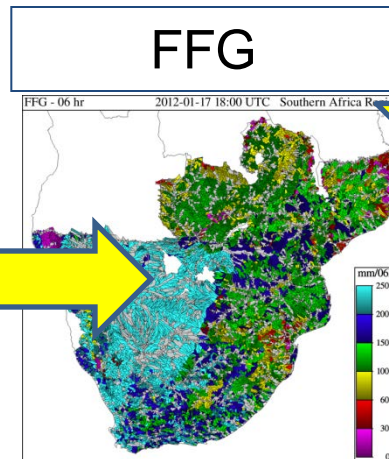
Persisted Rain Forecast



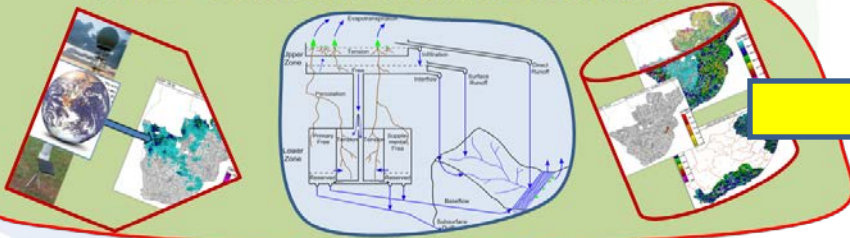
Persisted Flash Flood Threat (PFFT)

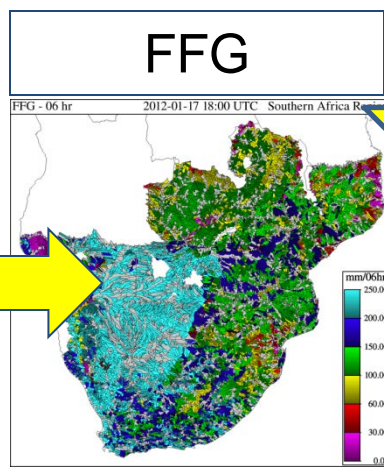
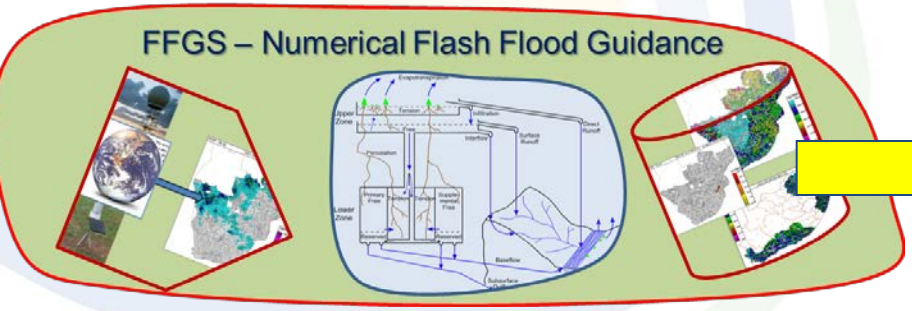
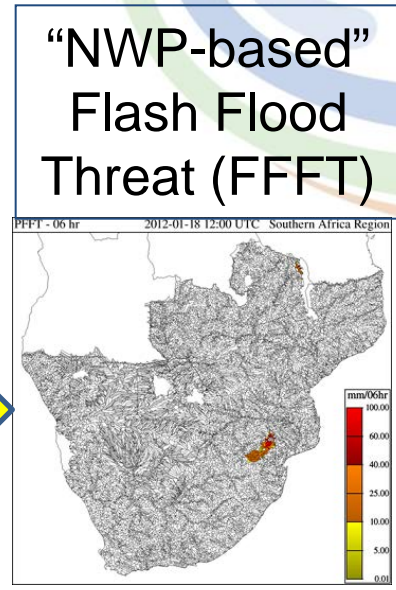
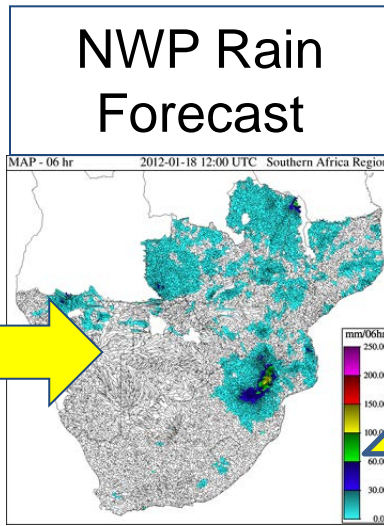
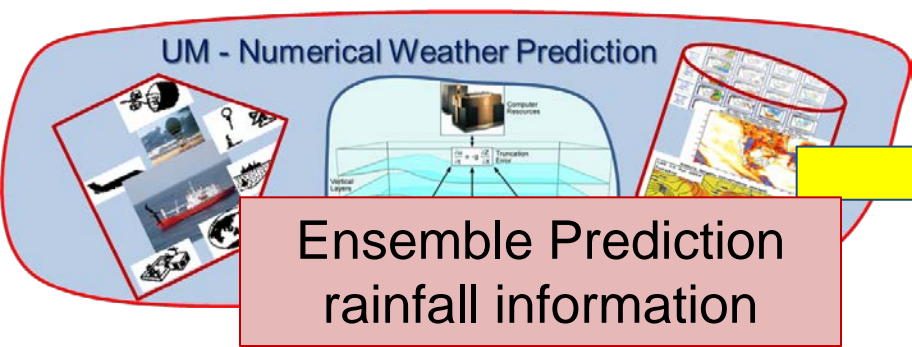


FFG



FFGS – Numerical Flash Flood Guidance





Regional Specialised Meteorological Center (RSMC) Pretoria

World Meteorological Organization
South African Weather Service
ISO 9001 Certified Organisation

Guidance Products

NWP & EPS Products

Regional Models

- UM S412
- UM Africa UM
- UM Africa Reunion

Global Products

- WRF-ENS
- ECMWF-ENS
- Met Office-ENS
- UKMO-ENS
- CMAP-ENS (GAWG)

Training Website

- Met-learning

SWFDP Training Nov 2012

- gneps
- gus

SWFDP Training Nov 2013

- gneps
- gus

RSMC Guidance Archive

Contact RSMC

Logout

Guidance Products

Short-range (1-2 Days)

- Map Day 1
- Map Day 2
- Prob Tables
- Discussion

Medium-range (3-5 Days)

- Map Day 3
- Map Day 4
- Map Day 5
- Prob Tables
- Discussion

SWFDP Evaluation Form

- Click here

Nowcasting Products

Satellite-Based Rainfall

Convective Thunderstorm Forecasts

Hydro-Estimator Rainfall Totals

- 1hr
- 3hr
- 6hr
- 24hr

Hydro-Estimator Rainfall Totals In Days

- 10 Days
- 30 Days
- 6months

Hail Forecasts from UM S412

- 10 UTC
- 12 UTC
- 18 UTC

Probability of Convective Thunderstorms

- CU
- Description of Product

Rapidly Developing Thunderstorms

- RDT
- Description of Product

Hydro-estimator Storm Tracks

- SADC-NW
- SADC-NE
- SADC-SE
- SADC-S
- Madagascar
- South Africa

Flash Flood Guidance

- SWFFG Portal

Regional and International Centers

- ECMWF
- UKMO
- UK Met Office
- UKMO
- CMAP - Reunion
- CMAP

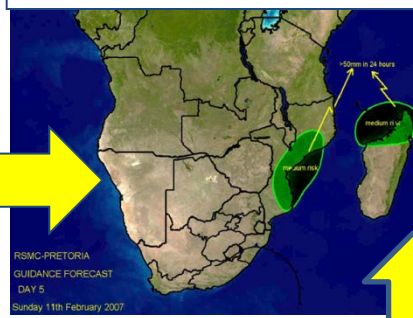
SADC Countries

- SADC Countries National Meteorological Services

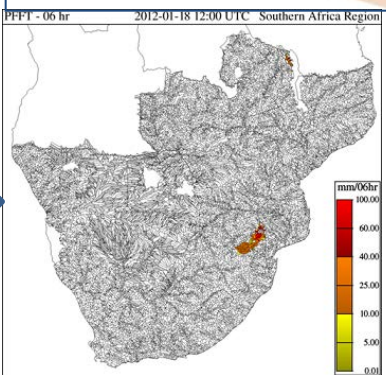
Other Services and Products

- Short-range
- Long-range (Seasonal)

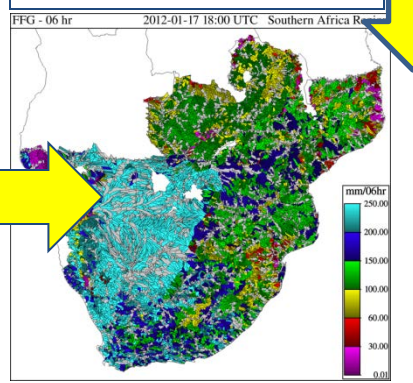
Guidance Rain Forecast



"Forecaster" Flash Flood Threat (CFFT)



FFG



FFGS – Numerical Flash Flood Guidance



Thank you