



# Experience in service delivery through working with regional centres

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World Meteorological Organization (WMO)

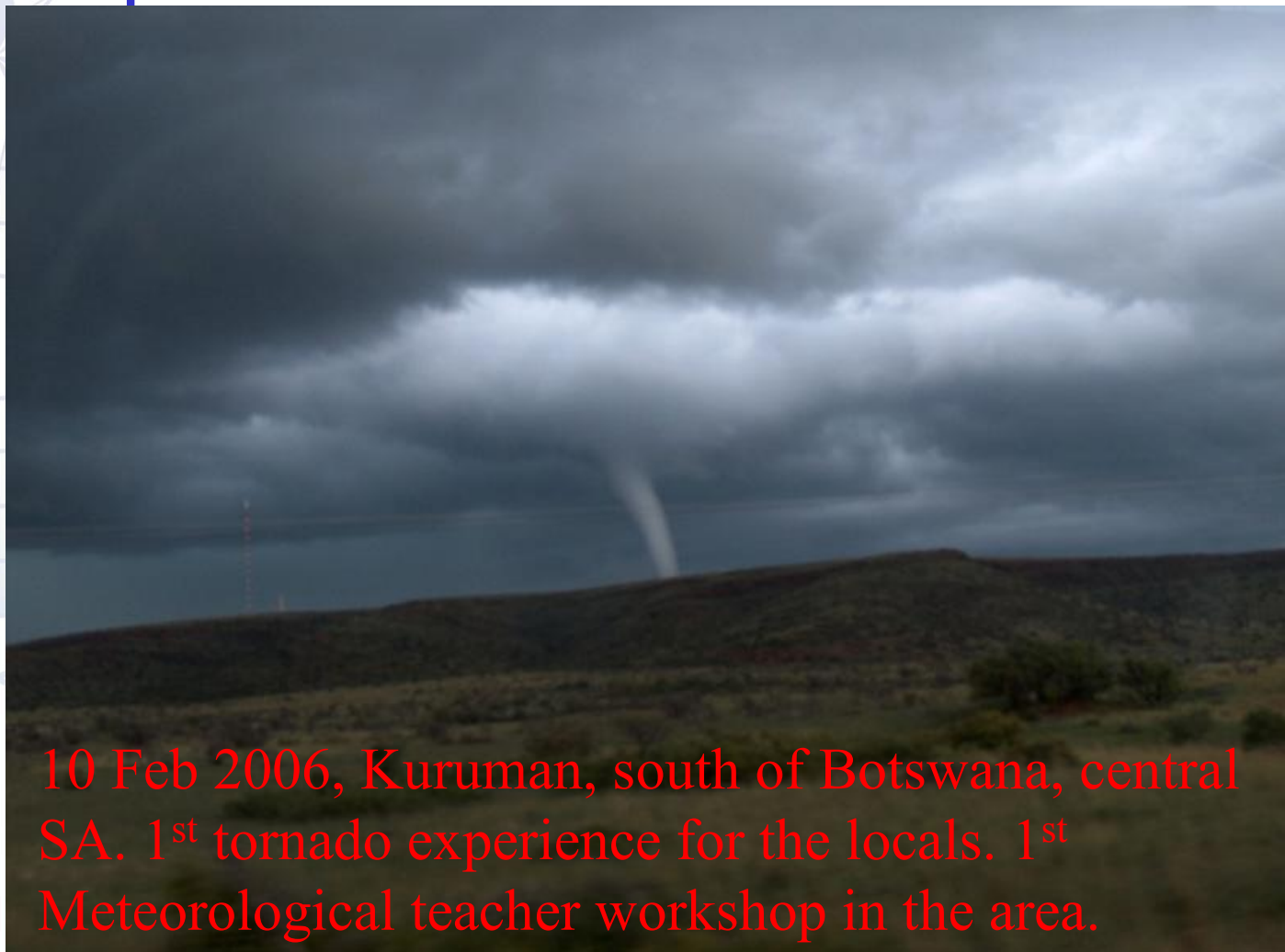
International Symposium on PWS

Geneva, Switzerland, 03-05 December 2007



South African  
Weather Service

Miracles do occur, 1<sup>st</sup> teacher workshop happened to be the first experience of the tornado for locals.



10 Feb 2006, Kuruman, south of Botswana, central SA. 1<sup>st</sup> tornado experience for the locals. 1<sup>st</sup> Meteorological teacher workshop in the area.



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# Content of the presentation

- Severe Weather Forecasting Demonstration Project (SWFDP) background.
- SWFDP key factors.
- Cascading principle of SWFDP and product example.
- SWFDP success areas.
- Challenges that affect service delivery.
- Proposals from 22 countries participated in SWFDP preparatory training of Nov 2007.
- Improvements in delivering service through media.
- Media engagements and service delivery in South Africa (Outcomes of WMO media training workshops, PWSP).
- The effects of various sources of severe weather warnings.
- Turning disasters into benefits.



# SWFDP background

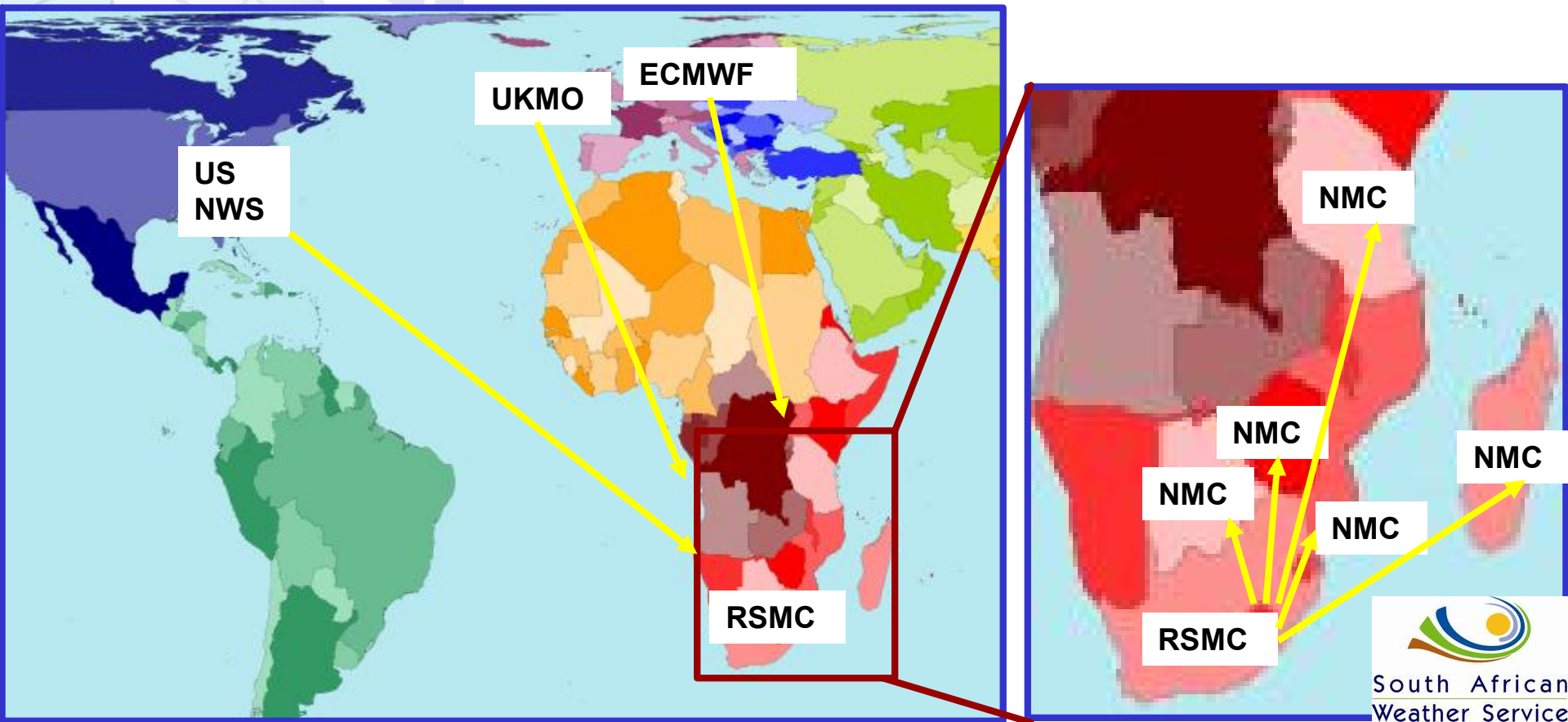
- WMO organised a series of sub-regional demonstration projects:
  - To improve severe weather forecast services in countries where sophisticated forecast systems not currently used (mostly developing countries)
- Principal focus on heavy rain and strong winds
- Main goals:
  - To improve technical ability of weather services
  - To improve lead-time of warnings
  - To improve the communication between global, regional and national meteorological centers (NMCs)
  - To improve interaction of NMCs with disaster management authorities before and during severe weather events
  - To identify gaps for improvement
- First sub-regional project in Southeast Africa, from Nov 2006 to Nov 2007

# Project key factors

- Low cost.
- High impact.
- Principal focus on heavy rain and strong winds
- Usage of existing technology and forecasting processes by forecasters.
- Cascading process of product dissemination.
- Demonstrate results within a short period.
- Continuous feedback on products and processes.

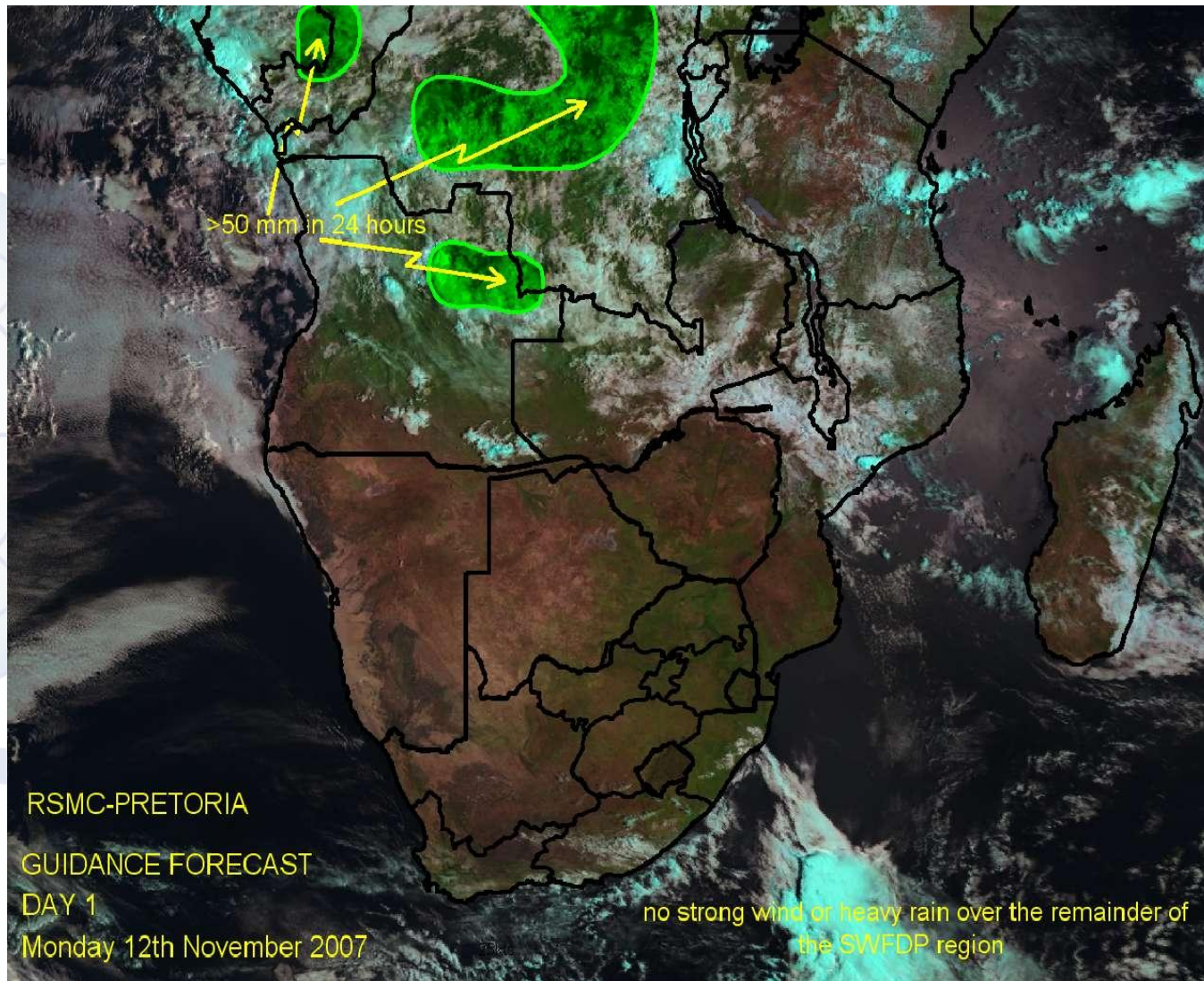
# Cascading process

- Global centre send products to RSMC-Pretoria
- RSMC prepares guidance forecasts for next 5 days and disseminates daily to 5 NMCs
- NMCs use guidance forecast in preparing warnings when appropriate to disaster management authorities





# Example of SWFDP products





# Regional Specialised Meteorological Center (RSMC) Pretoria



**Guidance Products**

**NWP & EPS Products**

**Regional Models**

- [UM SA12](#)
- [UM Africa LAM](#)
- [NCEP Medium-range Forecasts](#)

**Global Products**

- [ECMWF: EPS](#)
- [Met Office](#)
- [NOAA: GFS & EPS](#)
- [SAWS: EPS \(NCEP\)](#)

**Training Website**

- [Met-eLearning](#)

**Additional Products**

**Contact RSMC**

**Logout**

**Guidance Products**

**Short-range (1-2 Days)**

- [Map Day 1](#)
- [Map Day 2](#)
- [Risk Tables](#)
- [Discussion](#)

**Medium-range (3-5 Days)**

- [Map Day 3](#)
- [Map Day 4](#)
- [Map Day 5](#)
- [Prob Tables](#)
- [Discussion](#)

**SWFDP Evaluation Form**

- [Click Here](#)

**Regional and International Centers**

- [ECMWF](#)
- [NCEP](#)
- [UK Met Office](#)
- [WMO](#)
- [RSMC - Reunion](#)
- [ACMAD](#)

**SADC Countries**

- [SADC Countries National Meteorological Services](#)

**Other Services and Products**

- [Short-range](#)
- [Long-range \(Seasonal\)](#)



# SWFDP success areas

Both Civil protection authorities and NMCs expressed improvements in terms of:-

- The timelines of severe weather information.
- The relevance of the severe weather information for disaster management.
- The significance of the information.
- The credibility of the information.
- The interaction between the Meteorological Services Department and Civil Protection Departments (This area seem to be strong in the region, even when these structure comment in media about NMCs).
- Relationship and forecast perception by media.



# Challenges observed during the SWFDP that affect service delivery

- Communication.
  - Internet speed (slow).
  - Interaction between NMCs (Non existing).
  - Interaction between RSMC and NMCs (need improvement).
  - Feedback before, during and after severe weather event.
  - Language, not all conversant with English (not that significant)
- Now-cast capabilities and forecasting tools.
- Interpretation and understanding of forecast products for effective usage (users..media, disaster managers, public..etc)
- Over expectations on NWP ( limited, on now-cast).
- <sup>10</sup> Not taking full advantage of PWS guidelines

# Proposals from 22 countries of southern and central Africa, during Nov 2007

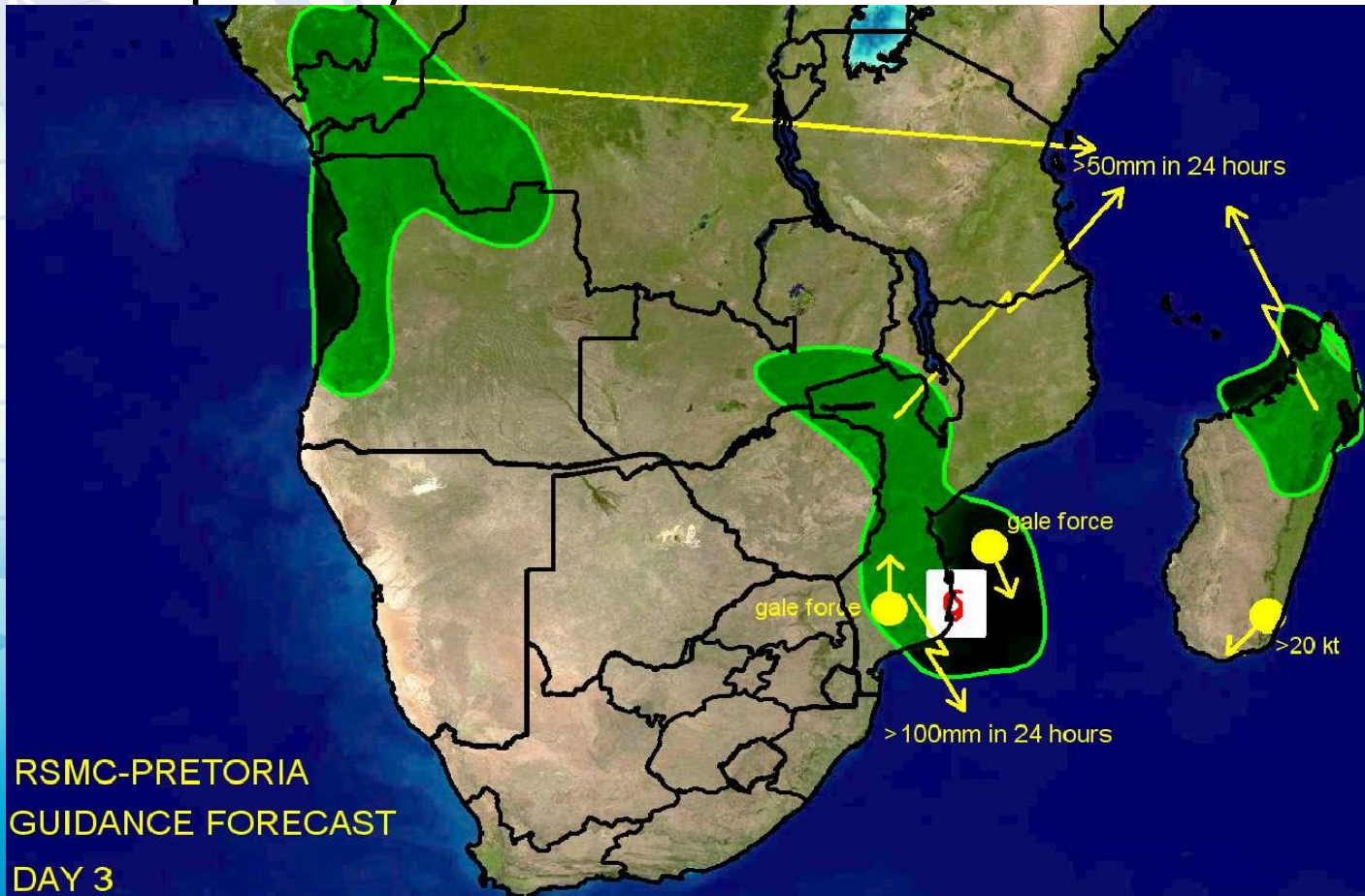
## Meeting held in RSMC Pretoria came with the following proposals moving forward:

- Carry on the functions and products availability “For ever”, beyond the demo phase of SWFDP.
- Global NWP centres to provide available NWP products, including in the form of probabilities;
- Regional centres to interpret information received from global NWP centres, run limited-area models to refine products, liaise with the participating NMCs;
- –NMCs to issue alerts, advisories, severe weather warnings; to liaise with disaster management authorities and to contribute to the evaluation of the program. Feed-back, Case studies, Quarterly reports
- 11 Implement it in other sub-regions of Africa, e.g  
– RSMC Nairobi.



# Improvements in delivering weather services through media

Zimbabwe demonstrated news paper clips with Positive reports on usefulness of the forecast during Tropical Cyclone FAVIO:-



RSMC-PRETORIA  
GUIDANCE FORECAST

DAY 3

Wednesday 21st February 2007



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# Media engagements(South Africa)

- Formal meetings with media-2006.
  - Sell the need, depart from same baseline (avoid direct accusations).
  - Appetise media as potential partners.
- Provincial media workshops introducing reasons for dialogues (+brief training)
  - 6 workshops from June-November 2007.
  - Work-shopped forecasters on media (parallel actions)
- It was clear that media is positive to dialogues and partnerships.
- Allowed media to suggest way forward.
- Invited disaster management authorities as main stake holders, gave them a chance to talk.
- The activity has top management support.



# Improvements in delivering weather services

Improvement in communication with and through

Media: Example of communication from forecasting office to media:-

- We have reports from the Cacadu Disaster Management that residents of Coldstream in the Tsitsikama district are being evacuated.
  - The R61 and R62 are still closed.
  - One lane is open on the N2 between Port Elizabeth and Cape Town
  - **As regards queries if this is the most rain Plettenburg Bay has received in 24 hours, the answer is no as 185 mm was recorded in 1935**
  - Rainfall measured between 08h00 and 14h00
    - Storms River 43 mm
    - Joubertina 39 mm
    - Plettenburg Bay 8.mm
  - The region for isolated heavy falls has now been extended to Cannon Rocks. Thus heavy falls are expected along the south coast and adjacent interior between Plettenburg Bay and Cannon Rocks. NOT exceeding 100 mm in the next 24 hours.
  - Please note that we are fully aware that the web site is slow, this is due to the
- 14 high volume of people using the site.



# Improvements continues,

Photos from reliable public members and disaster managers re-distributed to media by forecasting office with facts and forecast, 23 Nov 2007:-





# Improvements continues (Turn the disaster into opportunity),

**SAWS prepared an awareness project during the flooding period, announcement:-**

In a joint effort between the Disaster Management units of the Nelson Mandela Metropolitan Municipality and the Cacadu District Municipality and the South African Weather Service, severe weather awareness will be promoted using the 40<sup>th</sup> commemoration of the 1968 floods to gain the initial interest of the public. The emphasis will be on the risks of severe weather on the region, with the main emphasis on the effects of flooding in the metro (being one of the greatest risks to this area).





# Warnings distributed through hoax emails .

- 07 October 2007-08 )October 2007
  - Forecasters' analysis, expected isolated severe thunderstorm from towards the evening of the 8<sup>th</sup>, the day after.
  - Print media journalist interviewed the forecaster telephonically, PM of 7<sup>th</sup> October.
  - Newspaper issued on the 8<sup>th</sup> with the distorted interview content (tornado at 5 PM today, etc).
  - Between 8-9 AM 8<sup>th</sup> , telephones flooded the forecasting offices.



# Warnings distributed through hoax emails continued---

- 07 October 2007-08 )October 2007
  - Forecasting office discovered that there is hoax email from the member of the public, that also interpreted the news paper warning (also added spices, hurricane, tornado approaching Gauteng etc).
  - Forecast office issued press statement clarifying the warning (it was too late).
  - Internet jammed, telephones jammed....
  - Total chaos at its best (Companies releasing employees).
  - Every car was on the street.



# Lessons learned from the hoax emails .

- Forecaster confirmed the statement of the journalist in spite being work-shopped and warned as to never to confirm statements from journalists.[Should telephonic interviews be avoided??]
- Governments departments, companies and other organisations need to be engaged further, awareness campaigns need to be extended.

**Noted:** Media workshop for the affected area was still planned for 27 November (could have been interesting if it was after the workshop)

# Benefits from the hoax emails (Turn the disaster into opportunity).

- Wide publicity of the Meteorological Centre (emphasising that it is the only authoritative voice of the warnings)->Excellent opportunity.
- Parliament issued a memo that the Meteorological Centre must work with the Disaster Management Centre to produce an intergraded early warning system.
  - Weather channel is proposed.
  - Joint awareness programs with the Disaster Management Centre proposed.
  - Enhanced weather warnings communication system proposed through the Department of Communications.
  - There is an increased awareness and support from parliament.





The only way to achieve efficient usage of the weather product and services.

**IS TO:-**

- **Promote awareness, educate the providers and the users until**

**“FOR EVER”**



# THANK YOU!!!



**Oops! The rain is pouring**



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